



SEQUENCE LISTING

<110> Genentech, Inc. Ashkenazi, Avi Botstein, David Desnoyers, Luc Eaton, Dan L. Ferrara, Napoleone Filvaroff, Ellen Fong, Sherman Gao, Wei-Qiang Gerber, Hanspeter Gerritsen, Mary E. Goddard, A. Godowski, Paul J. Grimaldi, Christopher J. Gurney, Austin L. Hillan, Kenneth, J. Kljavin, Ivar J. Mather, Jennie P. Pan, James Paoni, Nicholas F. Roy, Margaret Ann Stewart, Timothy A. Tumas, Daniel Williams, P. Mickey Wood, William, I.

- <120> Secreted and Transmembrane Polypeptides and Nucleic Acids Encoding the Same
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Gln Glu Glu His Leu Glu Ala Trp Trp Leu Gln Leu Lys Ser Glu Tyr 100 105

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Ile Gly Phe Glu Glu Asp Ile Leu Ile Val Ser Glu Gly Lys Met Ala

Pro Phe Thr His Asp Phe Arg Lys Ala Gln Gln Arg Met Pro Ala Ile

75
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Val Ser Asp Cys Cys Pro Asp Phe Trp Asp Phe Cys Leu Gly Val Pro 95 85
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Pro Val Leu Gly Thr Tyr Trp Asp Asn Cys Asn Arg Cys Thr Cys Gln 125 115
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Tyr Val Cys Thr Pro Val Pro His Pro Asp Pro Pro Met Ala Leu Ser	
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Ser Thr Leu Asn Pro Val Leu Arg His Leu Phe Pro Gln Glu Ala Phe 150 150	
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Thr Phe Gly Ser Arg Val Arg Ile Lys Gly Ala Glu Ser Glu Lys Tyr 95 85
Ile Cys Met Asn Lys Arg Gly Lys Leu Ile Gly Lys Pro Ser Gly Lys 100 105
Ser Lys Asp Cys Val Phe Thr Glu Ile Val Leu Glu Asn Asn Tyr Thr 125 115
Ala Phe Gln Asn Ala Arg His Glu Gly Trp Phe Met Ala Phe Thr Arg 140 130 137 138
Gln Gly Arg Pro Arg Gln Ala Ser Arg Ser Arg Gln Asn Gln Arg Glu 150 150 150 150
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Leu Leu Ala Cys Pro Ser Val Cys Arg Cys Asp Arg Asn Phe Val Tyr 35

Cys Asn Glu Arg Ser Leu Thr Ser Val Pro Leu Gly Ile Pro Glu Gly 50

Val Thr Val Leu Tyr Leu His Asn Asn Gln Ile Asn Asn Ala Gly Phe
65 70 80

Pro Ala Glu Leu His Asn Val Gln Ser Val His Thr Val Tyr Leu Tyr 95

Gly Asn Gln Leu Asp Glu Phe Pro Met Asn Leu Pro Lys Asn Val Arg 100 105

Val Leu His Leu Gln Glu Asn Asn Ile Gln Thr Ile Ser Arg Ala Ala 115 120 125 Leu Ala Gln Leu Leu Lys Leu Glu Glu Leu His Leu Asp Asp Asn Ser Ile Ser Thr Val Gly Val Glu Asp Gly Ala Phe Arg Glu Ala Ile Ser Leu Lys Leu Leu Phe Leu Ser Lys Asn His Leu Ser Ser Val Pro Val 170 165 Gly Leu Pro Val Asp Leu Gln Glu Leu Arg Val Asp Glu Asn Arg Ile Ala Val Ile Ser Asp Met Ala Phe Gln Asn Leu Thr Ser Leu Glu Arg 200 Leu Ile Val Asp Gly Asn Leu Leu Thr Asn Lys Gly Ile Ala Glu Gly 215 Thr Phe Ser His Leu Thr Lys Leu Lys Glu Phe Ser Ile Val Arg Asn 230 Ser Leu Ser His Pro Pro Pro Asp Leu Pro Gly Thr His Leu Ile Arg Leu Tyr Leu Gln Asp Asn Gln Ile Asn His Ile Pro Leu Thr Ala Phe Ser Asn Leu Arg Lys Leu Glu Arg Leu Asp Ile Ser Asn Asn Gln Leu 280 275 Arg Met Leu Thr Gln Gly Val Phe Asp Asn Leu Ser Asn Leu Lys Gln Leu Thr Ala Arg Asn Asn Pro Trp Phe Cys Asp Cys Ser Ile Lys Trp 310 Val Thr Glu Trp Leu Lys Tyr Ile Pro Ser Ser Leu Asn Val Arg Gly 330 325 Phe Met Cys Gln Gly Pro Glu Gln Val Arg Gly Met Ala Val Arg Glu Leu Asn Met Asn Leu Leu Ser Cys Pro Thr Thr Pro Gly Leu Pro Leu Phe Thr Pro Ala Pro Ser Thr Ala Ser Pro Thr Thr Gln Pro Pro 375 Thr Leu Ser Ile Pro Asn Pro Ser Arg Ser Tyr Thr Pro Pro Thr Pro 390 385 Thr Thr Ser Lys Leu Pro Thr Ile Pro Asp Trp Asp Gly Arg Glu Arg

415 410 Val Thr Pro Pro Ile Ser Glu Arg Ile Gln Leu Ser Ile His Phe Val Asn Asp Thr Ser Ile Gln Val Ser Trp Leu Ser Leu Phe Thr Val Met Ala Tyr Lys Leu Thr Trp Val Lys Met Gly His Ser Leu Val Gly Gly Ile Val Gln Glu Arg Ile Val Ser Gly Glu Lys Gln His Leu Ser Leu Val Asn Leu Glu Pro Arg Ser Thr Tyr Arg Ile Cys Leu Val Pro Leu Asp Ala Phe Asn Tyr Arg Ala Val Glu Asp Thr Ile Cys Ser Glu Ala Thr Thr His Ala Ser Tyr Leu Asn Asn Gly Ser Asn Thr Ala Ser Ser His Glu Gln Thr Thr Ser His Ser Met Gly Ser Pro Phe Leu Leu Ala Gly Leu Ile Gly Gly Ala Val Ile Phe Val Leu Val Val Leu Leu Ser Val Phe Cys Trp His Met His Lys Lys Gly Arg Tyr Thr Ser Gln Lys Trp Lys Tyr Asn Arg Gly Arg Arg Lys Asp Asp Tyr Cys Glu Ala Gly Thr Lys Lys Asp Asn Ser Ile Leu Glu Met Thr Glu Thr Ser Phe Gln Ile Val Ser Leu Asn Asn Asp Gln Leu Leu Lys Gly Asp Phe Arg Leu Gln Pro Ile Tyr Thr Pro Asn Gly Gly Ile Asn Tyr Thr Asp Cys His Ile Pro Asn Asn Met Arg Tyr Cys Asn Ser Ser Val Pro Asp Leu Glu His Cys His Thr 660 <210> 29 <211> 21 <212> DNA

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Hall Bur Hall	<400> 31 acgcagattt gagaaggctg tc	
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<212> PRT

<213> Homo sapiens

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35

Ser Ser Cys Glu Asn Lys Arg Ala Asp Leu Val Phe Ile Ile Asp Ser 50

Ser Arg Ser Val Asn Thr His Asp Tyr Ala Lys Val Lys Glu Phe Ile
65 70 80

Val Asp Ile Leu Gln Phe Leu Asp Ile Gly Pro Asp Val Thr Arg Val 85

Gly Leu Leu Gln Tyr Gly Ser Thr Val Lys Asn Glu Phe Ser Leu Lys
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100

Thr Phe Lys Arg Lys Ser Glu Val Glu Arg Ala Val Lys Arg Met Arg 115

His Leu Ser Thr Gly Thr Met Thr Gly Leu Ala Ile Gln Tyr Ala Leu 130

Asn Ile Ala Phe Ser Glu Ala Glu Gly Ala Arg Pro Leu Arg Glu Asn 145

Val Pro Arg Val Ile Met Ile Val Thr Asp Gly Arg Pro Gln Asp Ser 170 165

Val Ala Glu Val Ala Ala Lys Ala Arg Asp Thr Gly Ile Leu Ile Phe 180

Ala Ile Gly Val Gly Gln Val Asp Phe Asn Thr Leu Lys Ser Ile Gly 195

Ser Glu Pro His Glu Asp His Val Phe Leu Val Ala Asn Phe Ser Gln 210

Ile Glu Thr Leu Thr Ser Val Phe Gln Lys Lys Leu Cys Thr Ala His

235	240
220	the Cys Ile Asn Ile
Met Cys Ser Thr Leu Glu His Asn Cys Ala His P 250 245	255
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Asn Cys Glu Gln Leu Cys Val Asn Val Pro Gly	Ser Phe Val Cys Gin 300
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Asn Ala Asp Gly Ser Tyr Leu Cys Gln Cys His	Glu Gly Phe Ala Leu 350
Asn Pro Asp Glu Lys Thr Cys Thr Arg Ile Ass	n Tyr Cys Ala Leu Abn 365
Lys Pro Gly Cys Glu His Glu Cys Val Asn Me 375	380 O Asn Gly Lys Thr Cys
370 Cys Arg Cys His Arg Gly Tyr Thr Leu Asp Pr 390 390	400 95
385 Ser Arg Val Asp His Cys Ala Gln Gln Asp H: 410	is Gly Cys Glu GII Leu 415
405 Cys Leu Asn Thr Glu Asp Ser Phe Val Cys G 425	In Cys Ser Glu Gly File 430
Leu Ile Asn Glu Asp Leu Lys Thr Cys Ser F	Arg Val Asp Tyr Cys Leu 445
435 Leu Ser Asp His Gly Cys Glu Tyr Ser Cys 1	Val Asn Met Asp Arg Ser 460
Phe Ala Cys Gln Cys Pro Glu Gly His Val	Leu Arg Ser Asp Gly Lys 480 475
465 Thr Cys Ala Lys Leu Asp Ser Cys Ala Leu 490	Gly Asp His Gly Cys Glu 495
485 His Ser Cys Val Ser Ser Glu Asp Ser Phe 500	Val Cys Gln Cys Pne Glu 510

- Gly Tyr Ile Leu Arg Glu Asp Gly Lys Thr Cys Arg Arg Lys Asp Val 515 520 525
- Cys Gln Ala Ile Asp His Gly Cys Glu His Ile Cys Val Asn Ser Asp 530 535
- Asp Ser Tyr Thr Cys Glu Cys Leu Glu Gly Phe Arg Leu Ala Glu Asp 555 560
- Gly Lys Arg Cys Arg Arg Lys Asp Val Cys Lys Ser Thr His His Gly 575
- Cys Glu His Ile Cys Val Asn Asn Gly Asn Ser Tyr Ile Cys Lys Cys 580
- Ser Glu Gly Phe Val Leu Ala Glu Asp Gly Arg Arg Cys Lys Lys Cys 595 600 605
- Thr Glu Gly Pro Ile Asp Leu Val Phe Val Ile Asp Gly Ser Lys Ser 610 620
- Leu Gly Glu Glu Asn Phe Glu Val Val Lys Gln Phe Val Thr Gly Ile 625 630 640
- Ile Asp Ser Leu Thr Ile Ser Pro Lys Ala Ala Arg Val Gly Leu Leu 655
- Gln Tyr Ser Thr Gln Val His Thr Glu Phe Thr Leu Arg Asn Phe Asn 660 665
- Ser Ala Lys Asp Met Lys Lys Ala Val Ala His Met Lys Tyr Met Gly 685
- Lys Gly Ser Met Thr Gly Leu Ala Leu Lys His Met Phe Glu Arg Ser 690 700
- Phe Thr Gln Gly Glu Gly Ala Arg Pro Leu Ser Thr Arg Val Pro Arg 720
- Ala Ala Ile Val Phe Thr Asp Gly Arg Ala Gln Asp Asp Val Ser Glu 735
- Trp Ala Ser Lys Ala Lys Ala Asn Gly Ile Thr Met Tyr Ala Val Gly
 740 745
- Val Gly Lys Ala Ile Glu Glu Glu Leu Gln Glu Ile Ala Ser Glu Pro 755 760 765
- Thr Asn Lys His Leu Phe Tyr Ala Glu Asp Phe Ser Thr Met Asp Glu
 770 780
- Ile Ser Glu Lys Leu Lys Lys Gly Ile Cys Glu Ala Leu Glu Asp Ser 795 790 795

Asp Gly Arg Gln Asp Ser Pro Ala Gly Glu Leu Pro Lys Thr Val Gln 805	
Gln Pro Thr Glu Ser Glu Pro Val Thr Ile Asn Ile Gln Asp Leu Leu 820 825	
Ser Cys Ser Asn Phe Ala Val Gln His Arg Tyr Leu Phe Glu Glu Asp 845	
Asn Leu Leu Arg Ser Thr Gln Lys Leu Ser His Ser Thr Lys Pro Ser 850 855	
Gly Ser Pro Leu Glu Glu Lys His Asp Gln Cys Lys Cys Glu Asn Leu 870 875	
Ile Met Phe Gln Asn Leu Ala Asn Glu Glu Val Arg Lys Leu Thr Gln 895	
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Arg Tyr Arg 915	
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 gggccatgat treccteceg gggcccctgg tgaccaactt getgeggttt trgttectgg 180
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Pro Trp Glu Val	70	Met Trp Phe Phe Lys G 75	
Glu Asp Gln Val	85	r Ile Asn Gly Val Thr T 90	
100	J	r Met Pro Ser Arg Asn I 105	
115		s Asp Ser Gly Pro Tyr 1	
130			
145	150	al Pro Pro Ala Pro Pro 155	
	162	ly Ala Asn Val Thr Leu 170	
13	80	al Gln Tyr Gln Trp Asp 185	
195		la Pro Ala Leu Asp Val 200	
210	-	Ser Ser Ser Met Ala Gly 220	
225	230	Gly Thr Ala Gln Cys Asr 235	
	245	Ala Ala Val Val Ala Gly 250	
	260	Leu Leu Ala Gly Leu Va 265	
Arg Arg Gly 275	Lys Ala Leu	Glu Glu Pro Ala Asn As 280	p Ile Lys Glu Asp 285

Ala Ile Ala Pro Arg Thr Leu Pro Trp Pro Lys Ser Ser Asp Thr Ile 295 300	
Ser Lys Asn Gly Thr Leu Ser Ser Val Thr Ser Ala Arg Ala Leu Arg 315 320	
Pro Pro His Gly Pro Pro Arg Pro Gly Ala Leu Thr Pro Thr Pro Ser 325	
Leu Ser Ser Gln Ala Leu Pro Ser Pro Arg Leu Pro Thr Thr Asp Gly 340 345 350	
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<213> Homo sapiens

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Ser Gly Asn Gly Val Thr Ile Cys Glu Asp Asp Asn Glu Cys Gly Asn 50 55

Leu Thr Gln Ser Cys Gly Glu Asn Ala Asn Cys Thr Asn Thr Glu Gly 65 70 75 80

Ser Tyr Tyr Cys Met Cys Val Pro Gly Phe Arg Ser Ser Ser Asn Gln 95

Asp Arg Phe Ile Thr Asn Asp Gly Thr Val Cys Ile Glu Asn Val Asn 100 105

Ala Asn Cys His Leu Asp Asn Val Cys Ile Ala Ala Asn Ile Asn Lys 115

Thr Leu Thr Lys Ile Arg Ser Ile Lys Glu Pro Val Ala Leu Leu Gln 130

Glu Val Tyr Arg Asn Ser Val Thr Asp Leu Ser Pro Thr Asp Ile Ile 145 150 150

Thr Tyr Ile Glu Ile Leu Ala Glu Ser Ser Ser Leu Leu Gly Tyr Lys 165 170 175

Asn Asn Thr Ile Ser Ala Lys Asp Thr Leu Ser Asn Ser Thr Leu Thr

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Leu Met His Thr Val	230			
Gln Lys Thr Thr Glu 245		201		
Val Phe Phe Phe Asp 260		200		
Asn Met Asp Gly Asp 275	20	•		
Tyr Asp Ser Asn Gly 290	295			
305	. 310			
Asn Tyr Asp Asn Ser	1			
Ser Val Ser Met Ser 340		5 5 -		
Ile Thr Phe Thr Let	31	30		
Leu Cys Ala Phe Tr 370	3/5			
Ser Ser Glu Gly Cy 385	390			
Cys Arg Cys Asn Hi	5			
Pro Ser Ile Gly Il 420				
Leu Gly Ile Ile I 435	le Ser Leu I	lle Cys Leu <i>l</i> 140	Ala Ile Cys I 445	le Phe Thr
Phe Trp Phe Phe So	er Glu Ile (455	Gln Ser Thr	Arg Thr Thr 1	[le His Lys

Asn Leu Cys Cys Ser Leu Phe Leu Ala Glu Leu Val Phe Leu Val Gly Ile Asn Thr Asn Thr Asn Lys Leu Phe Cys Ser Ile Ile Ala Gly Leu 465 485 Leu His Tyr Phe Phe Leu Ala Ala Phe Ala Trp Met Cys Ile Glu Gly Ile His Leu Tyr Leu Ile Val Val Gly Val Ile Tyr Asn Lys Gly Phe 515 Leu His Lys Asn Phe Tyr Ile Phe Gly Tyr Leu Ser Pro Ala Val Val Val Gly Phe Ser Ala Ala Leu Gly Tyr Arg Tyr Tyr Gly Thr Thr Lys 550 Val Cys Trp Leu Ser Thr Glu Asn Asn Phe Ile Trp Ser Phe Ile Gly 545 565 Pro Ala Cys Leu Ile Ile Leu Val Asn Leu Leu Ala Phe Gly Val Ile Ile Tyr Lys Val Phe Arg His Thr Ala Gly Leu Lys Pro Glu Val Ser Cys Phe Glu Asn Ile Arg Ser Cys Ala Arg Gly Ala Leu Ala Leu Leu 610 Phe Leu Leu Gly Thr Thr Trp Ile Phe Gly Val Leu His Val Val His 630 Ala Ser Val Val Thr Ala Tyr Leu Phe Thr Val Ser Asn Ala Phe Gln Gly Met Phe Ile Phe Leu Phe Leu Cys Val Leu Ser Arg Lys Ile Gln Glu Glu Tyr Tyr Arg Leu Phe Lys Asn Val Pro Cys Cys Phe Gly Cys Leu Arg 690 <210> 50 <211> 589 <212> DNA

<213> Homo sapiens

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<211> 216

<212> PRT

<213> Homo sapiens

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Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala 55 50

Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His Ser Leu Leu 80 75 80	
Glu Ile Lys Ala Val Ala Leu Arg Thr Val Ala Ile Lys Gly Vai His 90 95	
Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met Gln Gly Leu 100 105	
Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro 125	
Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu Pro Val Ser 130 130 130 140	
Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu 150 150	
Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro Glu Glu Pro 175 165	
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    Leu Val Val Ala Leu Gly Tyr His Lys Ala Tyr Gly Phe Ser Ala Pro
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- Ala Cys Lys Thr Pro Lys Lys Thr Val Ser Ser Arg Leu Glu Trp Lys
 50 55
- Lys Leu Gly Arg Ser Val Ser Phe Val Tyr Tyr Gln Gln Thr Leu Gln 65 70 80
- Gly Asp Phe Lys Asn Arg Ala Glu Met Ile Asp Phe Asn Ile Arg Ile 90 95
- Lys Asn Val Thr Arg Ser Asp Ala Gly Lys Tyr Arg Cys Glu Val Ser
- Ala Pro Ser Glu Gln Gly Gln Asn Leu Glu Glu Asp Thr Val Thr Leu 115
- Glu Val Leu Val Ala Pro Ala Val Pro Ser Cys Glu Val Pro Ser Ser 130 135
- Ala Leu Ser Gly Thr Val Val Glu Leu Arg Cys Gln Asp Lys Glu Gly 145 150 155
- Asn Pro Ala Pro Glu Tyr Thr Trp Phe Lys Asp Gly Ile Arg Leu Leu 170 175
- Glu Asn Pro Arg Leu Gly Ser Gln Ser Thr Asn Ser Ser Tyr Thr Met
 180 185
- Asn Thr Lys Thr Gly Thr Leu Gln Phe Asn Thr Val Ser Lys Leu Asp 195 200 205
- Thr Gly Glu Tyr Ser Cys Glu Ala Arg Asn Ser Val Gly Tyr Arg Arg 210 220
- Cys Pro Gly Lys Arg Met Gln Val Asp Asp Leu Asn Ile Ser Gly Ile 225 235 240
- Ile Ala Ala Val Val Val Ala Leu Val Ile Ser Val Cys Gly Leu 255
- Gly Val Cys Tyr Ala Gln Arg Lys Gly Tyr Phe Ser Lys Glu Thr Ser 260 265
- Phe Gln Lys Ser Asn Ser Ser Ser Lys Ala Thr Thr Met Ser Glu Asn 275
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Cys Thr Cys Glu Ile Arg Pro Trp Phe Thr Pro Arg Ser Ile Tyr Met 40 35

Glu Ala Ser Thr Val Asp Cys Asn Asp Leu Gly Leu Leu Thr Phe Pro 55

<211> 708

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350 345 Thr Ile Glu Ser Leu Pro Asn Leu Lys Glu Ile Ser Ile His Ser Asn Pro Ile Arg Cys Asp Cys Val Ile Arg Trp Met Asn Met Asn Lys Thr Asn Ile Arg Phe Met Glu Pro Asp Ser Leu Phe Cys Val Asp Pro Pro Glu Phe Gln Gly Gln Asn Val Arg Gln Val His Phe Arg Asp Met Met Glu Ile Cys Leu Pro Leu Ile Ala Pro Glu Ser Phe Pro Ser Asn Leu Asn Val Glu Ala Gly Ser Tyr Val Ser Phe His Cys Arg Ala Thr Ala Glu Pro Gln Pro Glu Ile Tyr Trp Ile Thr Pro Ser Gly Gln Lys Leu Leu Pro Asn Thr Leu Thr Asp Lys Phe Tyr Val His Ser Glu Gly Thr Leu Asp Ile Asn Gly Val Thr Pro Lys Glu Gly Gly Leu Tyr Thr Cys Ile Ala Thr Asn Leu Val Gly Ala Asp Leu Lys Ser Val Met Ile Lys Val Asp Gly Ser Phe Pro Gln Asp Asn Asn Gly Ser Leu Asn Ile Lys Ile Arg Asp Ile Gln Ala Asn Ser Val Leu Val Ser Trp Lys Ala Ser Ser Lys Ile Leu Lys Ser Ser Val Lys Trp Thr Ala Phe Val Lys Thr Glu Asn Ser His Ala Ala Gln Ser Ala Arg Ile Pro Ser Asp Val Lys Val Tyr Asn Leu Thr His Leu Asn Pro Ser Thr Glu Tyr Lys Ile Cys Ile Asp Ile Pro Thr Ile Tyr Gln Lys Asn Arg Lys Lys Cys Val Asn Val Thr Thr Lys Gly Leu His Pro Asp Gln Lys Glu Tyr Glu Lys Asn

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Met Cys Pro Lys Gly Cys Leu Cys Ser Ser Ser Gly Gly Leu Asn Val 35 40 45

Thr Cys Ser Asn Ala Asn Leu Lys Glu Ile Pro Arg Asp Leu Pro Pro 50 55 60

Glu Thr Val Leu Leu Tyr Leu Asp Ser Asn Gln Ile Thr Ser Ile Pro 65 70 75 80

Asn Glu Ile Phe Lys Asp Leu His Gln Leu Arg Val Leu Asn Leu Ser 85 90 95

Lys Asn Gly Ile Glu Phe Ile Asp Glu His Ala Phe Lys Gly Val Ala 100 105 110

Glu Thr Leu Gln Thr Leu Asp Leu Ser Asp Asn Arg Ile Gln Ser Val 115 120 125

His Lys Asn Ala Phe Asn Asn Leu Lys Ala Arg Ala Arg Ile Ala Asn 130 135 140

Asn Pro Trp His Cys Asp Cys Thr Leu Gln Gln Val Leu Arg Ser Met 145 150 155 160

Ala Ser Asn His Glu Thr Ala His Asn Val Ile Cys Lys Thr Ser Val 165 170 175

Leu Asp Glu His Ala Gly Arg Pro Phe Leu Asn Ala Ala Asn Asp Ala 180 185 190

Asp Leu Cys Asn Leu Pro Lys Lys Thr Thr Asp Tyr Ala Met Leu Val 195 200 205

Thr Met Phe Gly Trp Phe Thr Met Val Ile Ser Tyr Val Val Tyr Tyr 210 215 220

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- Ser Ala Gln Asp Arg Ala Val Leu Cys His Arg Lys Cys Phe Val Ala 50
- Val Pro Glu Gly Ile Pro Thr Glu Thr Arg Leu Leu Asp Leu Gly Lys
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- Asn Arg Ile Lys Thr Leu Asn Gln Asp Glu Phe Ala Ser Phe Pro His
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- Gly Ala Phe Asn Asn Leu Phe Asn Leu Arg Thr Leu Gly Leu Arg Ser 115
- Asn Arg Leu Lys Leu Ile Pro Leu Gly Val Phe Thr Gly Leu Ser Asn 130
- Leu Thr Lys Gln Asp Ile Ser Glu Asn Lys Ile Val Ile Leu Leu Asp 145 150 155 160
- Tyr Met Phe Gln Asp Leu Tyr Asn Leu Lys Ser Leu Glu Val Gly Asp 165 170 175
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- Leu Glu Gln Leu Thr Leu Glu Lys Cys Asn Leu Thr Ser Ile Pro Thr 195 200 205
- Glu Ala Leu Ser His Leu His Gly Leu Ile Val Leu Arg Leu Arg His 210 220
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- Cys Asn Leu Thr Ala Val Pro Tyr Leu Ala Val Arg His Leu Val Tyr 275 280 285
- Leu Arg Phe Leu Asn Leu Ser Tyr Asn Pro Ile Ser Thr Ile Glu Gly 290 295

- Ser Met Leu His Glu Leu Leu Arg Leu Gln Glu Ile Gln Leu Val Gly Gly Gln Leu Ala Val Val Glu Pro Tyr Ala Phe Arg Gly Leu Asn Tyr
- Leu Arg Val Leu Asn Val Ser Gly Asn Gln Leu Thr Thr Leu Glu Glu
- Ser Val Phe His Ser Val Gly Asn Leu Glu Thr Leu Ile Leu Asp Ser
- Asn Pro Leu Ala Cys Asp Cys Arg Leu Leu Trp Val Phe Arg Arg Arg
- Trp Arg Leu Asn Phe Asn Arg Gln Gln Pro Thr Cys Ala Thr Pro Glu
- Phe Val Gln Gly Lys Glu Phe Lys Asp Phe Pro Asp Val Leu Leu Pro
- Asn Tyr Phe Thr Cys Arg Arg Ala Arg Ile Arg Asp Arg Lys Ala Gln
- Gln Val Phe Val Asp Glu Gly His Thr Val Gln Phe Val Cys Arg Ala
- Asp Gly Asp Pro Pro Pro Ala Ile Leu Trp Leu Ser Pro Arg Lys His
- Leu Val Ser Ala Lys Ser Asn Gly Arg Leu Thr Val Phe Pro Asp Gly
- Thr Leu Glu Val Arg Tyr Ala Gln Val Gln Asp Asn Gly Thr Tyr Leu
- Cys Ile Ala Ala Asn Ala Gly Gly Asn Asp Ser Met Pro Ala His Leu
- His Val Arg Ser Tyr Ser Pro Asp Trp Pro His Gln Pro Asn Lys Thr
- Phe Ala Phe Ile Ser Asn Gln Pro Gly Glu Gly Glu Ala Asn Ser Thr
- Arg Ala Thr Val Pro Phe Pro Phe Asp Ile Lys Thr Leu Ile Ile Ala 545
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65 70 75 80

Asn Arg Ile Gln Leu Val Thr Ser Thr Pro His Glu Leu Ser Ile Ser 85 90 95

Ile Ser Asn Val Ala Leu Ala Asp Glu Gly Glu Tyr Thr Cys Ser Ile 100 105 110

Phe Thr Met Pro Val Arg Thr Ala Lys Ser Leu Val Thr Val Leu Gly 115 120 125

Ile Pro Gln Lys Pro Ile Ile Thr Gly Tyr Lys Ser Ser Leu Arg Glu 130 135 140

Lys Asp Thr Ala Thr Leu Asn Cys Gln Ser Ser Gly Ser Lys Pro Ala 145 150 155 160

Ala Arg Leu Thr Trp Arg Lys Gly Asp Gln Glu Leu His Gly Glu Pro 165 170 175

Thr Arg Ile Gln Glu Asp Pro Asn Gly Lys Thr Phe Thr Val Ser Ser 180 185 190

Ser Val Thr Phe Gln Val Thr Arg Glu Asp Asp Gly Ala Ser Ile Val

Cys Ser Val Asn His Glu Ser Leu Lys Gly Ala Asp Arg Ser Thr Ser 210 215 220

Gln Arg Ile Glu Val Leu Tyr Thr Pro Thr Ala Met Ile Arg Pro Asp 225 230 235 240

Pro Pro His Pro Arg Glu Gly Gln Lys Leu Leu Leu His Cys Glu Gly 245 250 255

Arg Gly Asn Pro Val Pro Gln Gln Tyr Leu Trp Glu Lys Glu Gly Ser 260 265 270

Val Pro Pro Leu Lys Met Thr Gln Glu Ser Ala Leu Ile Phe Pro Phe 275 280 285

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Pro Val Pro Ser Ser Ser Ser Thr Tyr His Ala Ile Ile Gly Gly Ile 325 330 335	
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oligonucleotide probe

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Ser Leu Gln Arg Phe Thr Ala Pro Thr Ser Gln Phe Tyr His Leu Phe 50

Leu His Gly Asn Ser Leu Thr Arg Leu Phe Pro Asn Glu Phe Ala Asn 70

Phe Tyr Asn Ala Val Ser Leu His Met Glu Asn Asn Gly Leu His Glu 85

Ile Val Pro Gly Ala Phe Leu Gly Leu Gln Leu Val Lys Arg Leu His

Ile Asn Asn Lys Ile Lys Ser Phe Arg Lys Gln Thr Phe Leu Gly

Leu Asp Asp Leu Glu Tyr Leu Gln Ala Asp Phe Asn Leu Leu Arg Asp

Ile Asp Pro Gly Ala Phe Gln Asp Leu Asn Lys Leu Glu Val Leu Ile

Leu Asn Asp Asn Leu Ile Ser Thr Leu Pro Ala Asn Val Phe Gln Tyr

Val Pro Ile Thr His Leu Asp Leu Arg Gly Asn Arg Leu Lys Thr Leu

Pro Tyr Glu Glu Val Leu Glu Gln Ile Pro Gly Ile Ala Glu Ile Leu

Leu Glu Asp Asn Pro Trp Asp Cys Thr Cys Asp Leu Leu Ser Leu Lys

Glu Trp Leu Glu Asn Ile Pro Lys Asn Ala Leu Ile Gly Arg Val 225

Cys Glu Ala Pro Thr Arg Leu Gln Gly Lys Asp Leu Asn Glu Thr Thr

Glu Gln Asp Leu Cys Pro Leu Lys Asn Arg Val Asp Ser Ser Leu Pro

Ala Pro Pro Ala Gln Glu Glu Thr Phe Ala Pro Gly Pro Leu Pro Thr

Pro Phe Lys Thr Asn Gly Gln Glu Asp His Ala Thr Pro Gly Ser Ala

Pro Asn Gly Gly Thr Lys Ile Pro Gly Asn Trp Gln Ile Lys Ile Arg

Pro Thr Ala Ala Ile Ala Thr Gly Ser Ser Arg Asn Lys Pro Leu Ala

Asn Ser Leu pro Cys pro Gly Gly Cys Ser Cys Asp His Ile Pro Gly

Ser Gly Leu Lys Met Asn Cys Asn Asn Arg Asn Val Ser Ser Leu Ala

Asp Leu Lys Pro Lys Leu Ser Asn Val Gln Glu Leu Phe Leu Arg Asp

Asn Lys Ile His Ser Ile Arg Lys Ser His Phe Val Asp Tyr Lys Asn 385

Leu Ile Leu Leu Asp Leu Gly Asn Asn Ile Ala Thr Val Glu Asn 415

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Asn Tyr Leu Asp Thr Leu Ser Arg Glu Lys Phe Ala Gly Leu Gln Asn 435

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Asn Leu Leu Arg Ser Leu Pro Val Asp Val Phe Ala Gly Val Ser Leu 495

Ser Lys Leu Ser Leu His Asn Asn Tyr Phe Met Tyr Leu Pro Val Ala 500 500 505

Gly Val Leu Asp Gln Leu Thr Ser Ile Ile Gln Ile Asp Leu His Gly 515

Asn Pro Trp Glu Cys Ser Cys Thr Ile Val Pro Phe Lys Gln Trp Ala 530 535

Glu Arg Leu Gly Ser Glu Val Leu Met Ser Asp Leu Lys Cys Glu Thr 545

Pro Val Asn Phe Phe Arg Lys Asp Phe Met Leu Leu Ser Asn Asp Glu 575

Ile Cys Pro Gln Leu Tyr Ala Arg Ile Ser Pro Thr Leu Thr Ser His 580

Ser Lys Asn Ser Thr Gly Leu Ala Glu Thr Gly Thr His Ser Asn Ser 595 600 605

Tyr Leu Asp Thr Ser Arg Val Ser Ile Ser Val Leu Val Pro Gly Leu 610 620

Leu Leu Val Phe Val Thr Ser Ala Phe Thr Val Val Gly Met Leu Val 625 630 630

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Ser Ala Ser Glu Ile Asn Ser Leu Gln Thr Val Cys Asp Ser Ser Tyr

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<212> PRT

<213> Homo sapiens

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Ala Ser Gly Ala Cys Tyr Ser Leu His His Ala Thr Met Lys Arg Gln 35

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340 345	
Ser Thr Met Ser Thr Leu Gln Met Ser Leu Gln Ala Glu Ser Lys Ala 365	
Thr Ile Thr Pro Ser Gly Ser Val Ile Ser Lys Phe Asn Ser Thr Thr	
Ser Ser Ala Thr Pro Gln Ala Phe Asp Ser Ser Ser Ala Val Val Phe 390 395 400	
Ile Phe Val Ser Thr Ala Val Val Val Leu Val Ile Leu Thr Met III	
Val Leu Gly Leu Val Lys Leu Cys Phe His Glu Ser Pro Ser Ser Gln 430 420	
Pro Arg Lys Glu Ser Met Gly Pro Pro Gly Leu Glu Ser Asp Pro Glu 440 445	
Pro Ala Ala Leu Gly Ser Ser Ser Ala His Cys Thr Asn Asn Gly Vai	
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<213> Homo sapiens
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Cys Gly Gly Ile Leu Thr Gly Glu Ser Gly Phe Ile Gly Ser Glu Gly

Phe Pro Gly Val Tyr Pro Pro Asn Ser Lys Cys Thr Trp Lys Ile Thr

- Val Pro Glu Gly Lys Val Val Leu Asn Phe Arg Phe Ile Asp Leu
- Glu Ser Asp Asn Leu Cys Arg Tyr Asp Phe Val Asp Val Tyr Asn Gly
- His Ala Asn Gly Gln Arg Ile Gly Arg Phe Cys Gly Thr Phe Arg Pro
- Gly Ala Leu Val Ser Ser Gly Asn Lys Met Met Val Gln Met Ile Ser
- Asp Ala Asn Thr Ala Gly Asn Gly Phe Met Ala Met Phe Ser Ala Ala
- Glu Pro Asn Glu Arg Gly Asp Gln Tyr Cys Gly Gly Leu Leu Asp Arg
- Pro Ser Gly Ser Phe Lys Thr Pro Asn Trp Pro Asp Arg Asp Tyr Pro
- Ala Gly Val Thr Cys Val Trp His Ile Val Ala Pro Lys Asn Gln Leu
- Ile Glu Leu Lys Phe Glu Lys Phe Asp Val Glu Arg Asp Asn Tyr Cys
- Arg Tyr Asp Tyr Val Ala Val Phe Asn Gly Gly Glu Val Asn Asp Ala
- Arg Arg Ile Gly Lys Tyr Cys Gly Asp Ser Pro Pro Ala Pro Ile Val
- Ser Glu Arg Asn Glu Leu Leu Ile Gln Phe Leu Ser Asp Leu Ser Leu
- Thr Ala Asp Gly Phe Ile Gly His Tyr Ile Phe Arg Pro Lys Lys Leu
- Pro Thr Thr Glu Gln Pro Val Thr Thr Thr Phe Pro Val Thr Thr
- Gly Leu Lys pro Thr Val Ala Leu Cys Gln Gln Lys Cys Arg Arg Thr
- Gly Thr Leu Glu Gly Asn Tyr Cys Ser Ser Asp Phe Val Leu Ala Gly
- Thr Val Ile Thr Thr Ile Thr Arg Asp Gly Ser Leu His Ala Thr Val
- Ser Ile Ile Asn Ile Tyr Lys Glu Gly Asn Leu Ala Ile Gln Gln Ala

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<213> Homo sapiens

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<211> 420

<212> PRT

<213> Homo sapiens

<400> 109

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Pro Pro Pro Gln Ser Ser Pro Pro Pro Gln Pro His Pro Cys His Thr 40

Cys Arg Gly Leu Val Asp Ser Phe Asn Lys Gly Leu Glu Arg Thr Ile 55

- Arg Asp Asn Phe Gly Gly Gly Asn Thr Ala Trp Glu Glu Glu Asn Leu Ser Lys Tyr Lys Asp Ser Glu Thr Arg Leu Val Glu Val Leu Glu Gly
- Val Cys Ser Lys Ser Asp Phe Glu Cys His Arg Leu Leu Glu Leu Ser
- Glu Glu Leu Val Glu Ser Trp Trp Phe His Lys Gln Gln Glu Ala Pro
- Asp Leu Phe Gln Trp Leu Cys Ser Asp Ser Leu Lys Leu Cys Cys Pro
- Ala Gly Thr Phe Gly Pro Ser Cys Leu Pro Cys Pro Gly Gly Thr Glu
- Arg Pro Cys Gly Gly Tyr Gly Gln Cys Glu Gly Glu Gly Thr Arg Gly
- Gly Ser Gly His Cys Asp Cys Gln Ala Gly Tyr Gly Glu Ala Cys
- Gly Gln Cys Gly Leu Gly Tyr Phe Glu Ala Glu Arg Asn Ala Ser His
- Leu Val Cys Ser Ala Cys Phe Gly Pro Cys Ala Arg Cys Ser Gly Pro
- Glu Glu Ser Asn Cys Leu Gln Cys Lys Lys Gly Trp Ala Leu His His
- Leu Lys Cys Val Asp Ile Asp Glu Cys Gly Thr Glu Gly Ala Asn Cys
- Gly Ala Asp Gln Phe Cys Val Asn Thr Glu Gly Ser Tyr Glu Cys Arg
- Asp Cys Ala Lys Ala Cys Leu Gly Cys Met Gly Ala Gly Pro Gly Arg
- Cys Lys Lys Cys Ser Pro Gly Tyr Gln Gln Val Gly Ser Lys Cys Leu
- Asp Val Asp Glu Cys Glu Thr Glu Val Cys Pro Gly Glu Asn Lys Gln
- Cys Glu Asn Thr Glu Gly Gly Tyr Arg Cys Ile Cys Ala Glu Gly Tyr
- Lys Gln Met Glu Gly Ile Cys Val Lys Glu Gln Ile Pro Glu Ser Ala

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Met Phe Phe Gly Ile Ile Cys Ala Leu Ala Thr Leu Ala Ala Lys 370 375 380	
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 65

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- Gly Ala Pro Ala Gly Leu Gly Glu Pro Gln Leu Glu Leu His Thr Leu 240
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Ser Cys Ala Tyr Ser Gly Phe Ser Ser Pro Arg Val Glu Trp Lys Phe

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Gly Gly Phe Asp Asp Leu Gln Val Cys Ala Asp Pro Gly Ile Pro Glu

Asn Gly Phe Arg Thr Pro Ser Gly Gly Val Phe Phe Glu Gly Ser Val

Ala Arg Phe His Cys Gln Asp Gly Phe Lys Leu Lys Gly Ala Thr Lys

Arg Leu Cys Leu Lys His Phe Asn Gly Thr Leu Gly Trp Ile Pro Ser 100

Asp Asn Ser Ile Cys Val Gln Glu Asp Cys Arg Ile Pro Gln Ile Glu

Asp Ala Glu Ile His Asn Lys Thr Tyr Arg His Gly Glu Lys Leu Ile

Ile Thr Cys His Glu Gly Phe Lys Ile Arg Tyr Pro Asp Leu His Asn

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Cys Gln Gly Cys Leu Arg Pro Leu Ala Ser Ser Asn Gly Tyr Val Asn

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Leu Gln Asn Leu Ile Trp Ser Ser Se	er Pro Pro Arg Cys Leu Ara 240 235
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Val Cys His Pro Arg Pro Cys Glu A	rg Tyr Asn His Gly Thr Val Val 65
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                                                                                                                                  tacaggeegt getgetggee gtgetgetag tacaggeegt getgetgge at a casaggeegt getgetgge tacaggeegt getgetgge tacaggeegt getgetgge tacaggeegt getgetgge gtgetgetgg tacaggeegt getgetgge tacaggeegt getgetgge tacaggeegt getgetgge tacaggeegt getgetgge tacaggeegt getgetgge gtgetgetgg tacaggeegt getgetgge tacaggeegt getgetgg tacaggeegt getgetgge tacaggeegt getgetgge tacaggeegt getgetgg tacaggeegt getgg tacaggeegt getgetgg tacaggeegt getgetgg tacaggeegt getgetgg tacaggeegt getgg tacaggeegt getgg tacaggeegt getgetgg tacaggeegt getgg tacagg tacaggeegt getgg tacaggeegt getgg tacagg tacagg tacagg tacagg 
                                                                                                                                    tgagtgcctc ggatttggac ctcagaggag ggcagccagt ctgccgggga gggacacaga 300
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ggccttgtta taaagtcatt tacttccatg atacttctcg aagactgaac tttgaggaag 360 ccaaagaagc ctgcaggagg gatggaggcc agctagtcag catcgagtct gaagatgaac 420 agaaactgat agaaaagttc attgaaaacc tcttgccatc tgatggtgac ttctggattg 480 ggetcaggag gegtgaggag aaacaaagca atagcacage etgecaggae etttatgett 540 ggactgatgg cagcatatca caatttagga actggtatgt ggatgagccg tcctgcggca 600 gcgaggtctg cgtggtcatg taccatcagc catcggcacc cgctggcatc ggaggcccct 660 acatgttcca gtggaatgat gaccggtgca acatgaagaa caatttcatt tgcaaatatt 720 ctgatgagaa accagcagtt ccttctagag aagctgaagg tgaggaaaca gagctgacaa 780 cacctgtact tecagaagaa acacaggaag aagatgeeaa aaaaacattt aaagaaagta 840 gagaagetge ettgaatetg geetacatee taateeecag catteceett etectee 900 ttgtggtcac cacagttgta tgttgggttt ggatctgtag aaaaagaaaa cgggagcagc 960 cagaccctag cacaaagaag caacaccca tctggccctc tcctcaccag ggaaacagcc 1020 cggacctaga ggtctacaat gtcataagaa aacaaagcga agctgactta gctgagaccc 1080 ggccagacct gaagaatatt tcattccgag tgtgttcggg agaagccact cccgatgaca 1140 tgtettgtga etatgacaac atggetgtga acceatcaga aagtgggttt gtgactetgg 1200 tgagcgtgga gagtggattt gtgaccaatg acatttatga gttctcccca gaccaaatgg 1260 ggaggagtaa ggagtctgga tgggtggaaa atgaaatata tggttattag gacatataaa 1320 aaactgaaac tgacaacaat ggaaaagaaa tgataagcaa aatcctctta ttttctataa 1380 ggaaaataca cagaaggtct atgaacaagc ttagatcagg tcctgtggat gagcatgtgg 1440 tececacgae etectgttgg acceecacgt tttggetgta tectttatee cagecagtea 1500 tccagctcga ccttatgaga aggtaccttg cccaggtctg gcacatagta gagtctcaat 1560 aaatgtcact tggttggttg tatctaactt ttaagggaca gagctttacc tggcagtgat 1620 aaagatgggc tgtggagctt ggaaaaccac ctetgttttc cttgctctat acagcagcac 1680 atattatcat acagacagaa aatccagaat cttttcaaag cccacatatg gtagcacagg 1740 ttggcctgtg catcggcaat tctcatatct gttttttca aagaataaaa tcaaataaag 1800 agcaggaaaa aaaaa

<210> 137 <211> 382

<212> PRT <213> Homo sapiens

Met Arg Pro Gly Thr Ala Leu Gln Ala Val Leu Leu Ala Val Leu Leu

Val Gly Leu Arg Ala Ala Thr Gly Arg Leu Leu Ser Ala Ser Asp Leu

Asp Leu Arg Gly Gly Gln Pro Val Cys Arg Gly Gly Thr Gln Arg Pro

Cys Tyr Lys Val Ile Tyr Phe His Asp Thr Ser Arg Arg Leu Asn Phe

Glu Glu Ala Lys Glu Ala Cys Arg Arg Asp Gly Gln Leu Val Ser

Ile Glu Ser Glu Asp Glu Gln Lys Leu Ile Glu Lys Phe Ile Glu Asn

Leu Leu Pro Ser Asp Gly Asp Phe Trp Ile Gly Leu Arg Arg Glu

Glu Lys Gln Ser Asn Ser Thr Ala Cys Gln Asp Leu Tyr Ala Trp Thr

Asp Gly Ser Ile Ser Gln Phe Arg Asn Trp Tyr Val Asp Glu Pro Ser

Cys Gly Ser Glu Val Cys Val Val Met Tyr His Gln Pro Ser Ala Pro

Ala Gly Ile Gly Gly Pro Tyr Met Phe Gln Trp Asn Asp Asp Arg Cys

Asn Met Lys Asn Asn Phe Ile Cys Lys Tyr Ser Asp Glu Lys Pro Ala

Val Pro Ser Arg Glu Ala Glu Gly Glu Glu Thr Glu Leu Thr Thr Pro

Val Leu Pro Glu Glu Thr Gln Glu Glu Asp Ala Lys Lys Thr Phe Lys

Glu Ser Arg Glu Ala Ala Leu Asn Leu Ala Tyr Ile Leu Ile Pro Ser

Ile Pro Leu Leu Leu Leu Val Val Thr Thr Val Val Cys Trp Val

Trp Ile Cys Arg Lys Arg Lys Arg Glu Gln Pro Asp Pro Ser Thr Lys

Lys Gln His Thr Ile Trp Pro Ser Pro His Gln Gly Asn Ser Pro Asp

Leu Glu Val Tyr Asn Val Ile Arg Lys Gln Ser Glu Ala Asp Leu Ala

Glu Thr Arg Pro Asp Leu Lys Asn Ile Ser Phe Arg Val Cys Ser Gly

Glu Ala Thr Pro Asp Asp Met Ser Cys Asp Tyr Asp Asn Met Ala Val

Asn Pro Ser Glu Ser Gly Phe Val Thr Leu Val Ser Val Glu Ser Gly

phe Val Thr Asn Asp Ile Tyr Glu Phe Ser Pro Asp Gln Met Gly Arg

Ser Lys Glu Ser Gly Trp Val Glu Asn Glu Ile Tyr Gly Tyr 375

<210> 138

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<400> 139 aagccaaaga agcctgcagg aggg	2.
<210> 140 <211> 24 <212> DNA <213> Artificial Sequence	
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<400> 140 cagtccaagc ataaaggtcc tggc	2.
<210> 141 <211> 1514 <212> DNA <213> Homo sapiens	
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tcagaaagaa ggacccatca tcatccacac tgatgaagca gattcagaag tcttgtatcc 780 caactaccaa agetgetgga geetgaggea gagaaccaga ggeeggagge agaetgeete 840 tttacagcca ggaatctcag aggatttgaa aaaggtgaag gacaggatgg gcattgacag 900 tagtgataaa gtggacttct tcatcctcct ggacaacgtg gctgccgagc aggcacacaa 960 cctcccaagc tgccccatgc tgaagagatt tgcacggatg atcgaacaga gagctgtgga 1020 cacatcettg tacatactge ccaaggaaga cagggaaagt etteagatgg cagtaggee 1080 attectecae atectagaga geaacetget gaaagecatg gactetgeea etgececega 1140 caagatcaga aagetgtate tetatgegge teatgatgtg acetteatae egetettaat 1200 gaccetgggg atttttgace acaaatggee accgtttget gttgacetga ccatggaact 1260 ttaccagcac ctggaatcta aggagtggtt tgtgcagctc tattaccacg ggaaggagca 1320 ggtgccgaga ggttgccctg atgggctctg cccgctggac atgttcttga atgccatgtc 1380 agtttatacc ttaagcccag aaaaatacca tgcactctgc tctcaaactc aggtgatgga 1440 agttggaaat gaagagtaac tgatttataa aagcaggatg tgttgatttt aaaataaagt 1500 gcctttatac aatg

<210> 142

<211> 428

<212> PRT

<213> Homo sapiens

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Leu Thr Ser Leu Ala Tyr Cys Leu His Gln Arg Arg Val Ala Leu Ala

Glu Leu Gln Glu Ala Asp Gly Gln Cys Pro Val Asp Arg Ser Leu Leu

Lys Leu Lys Met Val Gln Val Val Phe Arg His Gly Ala Arg Ser Pro

Leu Lys Pro Leu Pro Leu Glu Glu Gln Val Glu Trp Asn Pro Gln Leu

Leu Glu Val Pro Pro Gln Thr Gln Phe Asp Tyr Thr Val Thr Asn Leu

Ala Gly Gly Pro Lys Pro Tyr Ser Pro Tyr Asp Ser Gln Tyr His Glu

Thr Thr Leu Lys Gly Gly Met Phe Ala Gly Gln Leu Thr Lys Val Gly

Met Gln Gln Met Phe Ala Leu Gly Glu Arg Leu Arg Lys Asn Tyr Val

Glu Asp Ile Pro Phe Leu Ser Pro Thr Phe Asn Pro Gln Glu Val Phe 145

Ile Arg Ser Thr Asn Ile Phe Arg Asn Leu Glu Ser Thr Arg Cys Leu

Leu Ala Gly Leu Phe Gln Cys Gln Lys Glu Gly Pro Ile Ile His

Thr Asp Glu Ala Asp Ser Glu Val Leu Tyr Pro Asn Tyr Gln Ser Cys

Trp Ser Leu Arg Gln Arg Thr Arg Gly Arg Arg Gln Thr Ala Ser Leu

Gln Pro Gly Ile Ser Glu Asp Leu Lys Lys Val Lys Asp Arg Met Gly

Ile Asp Ser Ser Asp Lys Val Asp Phe Phe Ile Leu Leu Asp Asn Val

Ala Ala Glu Gln Ala His Asn Leu Pro Ser Cys Pro Met Leu Lys Arg

Phe Ala Arg Met Ile Glu Gln Arg Ala Val Asp Thr Ser Leu Tyr Ile

Leu Pro Lys Glu Asp Arg Glu Ser Leu Gln Met Ala Val Gly Pro Phe

Leu His Ile Leu Glu Ser Asn Leu Leu Lys Ala Met Asp Ser Ala Thr

Ala Pro Asp Lys Ile Arg Lys Leu Tyr Leu Tyr Ala Ala His Asp Val

Thr Phe Ile Pro Leu Leu Met Thr Leu Gly Ile Phe Asp His Lys Trp

Pro Pro Phe Ala Val Asp Leu Thr Met Glu Leu Tyr Gln His Leu Glu

Ser Lys Glu Trp Phe Val Gln Leu Tyr Tyr His Gly Lys Glu Gln Val

Pro Arg Gly Cys Pro Asp Gly Leu Cys Pro Leu Asp Met Phe Leu Asn

Ala Met Ser Val Tyr Thr Leu Ser Pro Glu Lys Tyr His Ala Leu Cys

Ser Gln Thr Gln Val Met Glu Val Gly Asn Glu Glu 420

<210> 143

<211> 24

<212> DNA <213> Artificial Sequence

	<220> <223> Description of Artificial Sequence: Synthetic oligonucleotide probe <400> 143 ccaactacca aagctgctgg agcc	24
	<pre><210> 144 <211> 24 <212> DNA <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic</pre>	
	<400> 144 gcagctctat taccacggga agga	24
	<210> 145 <211> 24 <212> DNA <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic oligonucleotide probe	
A THE THE PERSON NAMED IN STREET, NAMED	<400> 145 tccttcccgt ggtaatagag ctgc	24
إلى السال فإسال إلى مناسبة المسال المسال المسال المسال المسال المسال مطاعد معالمة المسال المسال المسال المسال	<210> 146 <211> 45 <212> DNA <213> Artificial Sequence	
	<220> <223> Description of Artificial Sequence: Synthetic oligonucleotide probe	45
	<400> 146 ggcagagaac cagaggccgg aggagactgc ctctttacag ccagg	
	<pre><210> 147 <211> 1686 <212> DNA <213> Homo sapiens <400> 147 ctcctcttaa catacttgca gctaaaacta aatattgctg cttggggacc ctcctcttaa catacttgca cttcacctgc cttggtcatg gctctgctat</pre>	teettetage 60 teteettgat 120
	<400> 147 ctcctcttaa catacttgca gctaaaacta aatattgctg cttggggacc cttaaatttc agctcatcac cttcacctgc cttggtcatg gctctgctat cttaaatttc agctcatcac ctggattcct agcgtctcca tctggagtgc ccttgccatt tgcaccagac ctggattcct agcgtctcca tctggagtgc	ggctggtggg 180

gggcctccac cgctgtgaag ggcgggtgga ggtggaacag aaaggccagt ggggcaccgt 240 gtgtgatgac ggctgggaca ttaaggacgt ggctgtgttg tgccgggagc tgggctgtgg 300 agetgecage ggaaccecta gtggtatttt gtatgageca ccagcagaaa aagagcaaaa 360 ggtcctcatc caatcagtca gttgcacagg aacagaagat acattggctc agtgtgagca 420 agaagaagtt tatgattgtt cacatgatga agatgctggg gcatcgtgtg agaacccaga 480 gagetettte tecceagtee cagagggtgt caggetgget gaeggeeetg ggeattgeaa 540 gggacgcgtg gaagtgaagc accagaacca gtggtatacc gtgtgccaga caggctggag 600 ceteegggee geaaaggtgg tgtgeeggea getgggatgt gggagggetg tactgactea 660 aaaacgctgc aacaagcatg cctatggccg aaaacccatc tggctgagcc agatgtcatg 720 ctcaggacga gaagcaaccc ttcaggattg cccttctggg ccttggggga agaacacctg 780 caaccatgat gaagacacgt gggtcgaatg tgaagatccc tttgacttga gactagtagg 840 aggagacaac ctctgctctg ggcgactgga ggtgctgcac aagggcgtat ggggctctgt 900 ctgtgatgac aactggggag aaaaggagga ccaggtggta tgcaagcaac tgggctgtgg 960 gaagtccctc tctccctcct tcagagaccg gaaatgctat ggccctgggg ttggccgcat 1020 ctggctggat aatgttcgtt gctcagggga ggagcagtcc ctggagcagt gccagcacag 1080 attttggggg tttcacgact gcacccacca ggaagatgtg gctgtcatct gctcagtgta 1140 ggtgggcatc atctaatctg ttgagtgcct gaatagaaga aaaacacaga agaagggagc 1200 atttactgtc tacatgactg catgggatga acactgatct tcttctgccc ttggactggg 1260 acttatactt ggtgcccctg attetcaggc cttcagagtt ggatcagaac ttacaacatc 1320 aggtctagtt ctcaggccat cagacatagt ttggaactac atcaccacct ttcctatgtc 1380 tccacattgc acacagcaga ttcccagcct ccataattgt gtgtatcaac tacttaaata 1440 catteteaca cacacaca cacacacaca cacacacaca cacacataca ceatttgtee 1500 tgtttctctg aagaactctg acaaaataca gattttggta ctgaaagaga ttctagagga 1560 acggaatttt aaggataaat tttctgaatt ggttatgggg tttctgaaat tggctctata 1620 atctaattag atataaaatt ctggtaactt tatttacaat aataaagata gcactatgtg 1680 ttcaaa

<210> 148 <211> 347 <212> PRT <213> Homo sapiens

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10

Phe Leu Ala Ser Pro Ser Gly Val Arg Leu Val Gly Gly Leu His Arg 25

Cys Glu Gly Arg Val Glu Val Glu Gln Lys Gly Gln Trp Gly Thr Val
45
35

Cys Asp Asp Gly Trp Asp Ile Lys Asp Val Ala Val Leu Cys Arg Glu
50 60

Leu Gly Cys Gly Ala Ala Ser Gly Thr Pro Ser Gly Ile Leu Tyr Glu
65 70 80

Pro Pro Ala Glu Lys Glu Gln Lys Val Leu Ile Gln Ser Val Ser Cys 95 85

Thr Gly Thr Glu Asp Thr Leu Ala Gln Cys Glu Gln Glu Glu Val Tyr 100 Asp Cys Ser His Asp Glu Asp Ala Gly Ala Ser Cys Glu Asn Pro Glu Ser Ser Phe Ser Pro Val Pro Glu Gly Val Arg Leu Ala Asp Gly Pro Gly His Cys Lys Gly Arg Val Glu Val Lys His Gln Asn Gln Trp Tyr Thr Val Cys Gln Thr Gly Trp Ser Leu Arg Ala Ala Lys Val Val Cys Arg Gln Leu Gly Cys Gly Arg Ala Val Leu Thr Gln Lys Arg Cys Asn Lys His Ala Tyr Gly Arg Lys Pro Ile Trp Leu Ser Gln Met Ser Cys Ser Gly Arg Glu Ala Thr Leu Gln Asp Cys Pro Ser Gly Pro Trp Gly Lys Asn Thr Cys Asn His Asp Glu Asp Thr Trp Val Glu Cys Glu Asp Pro Phe Asp Leu Arg Leu Val Gly Gly Asp Asn Leu Cys Ser Gly Arg 225 Leu Glu Val Leu His Lys Gly Val Trp Gly Ser Val Cys Asp Asp Asn Trp Gly Glu Lys Glu Asp Gln Val Val Cys Lys Gln Leu Gly Cys Gly Lys Ser Leu Ser Pro Ser Phe Arg Asp Arg Lys Cys Tyr Gly Pro Gly Val Gly Arg Ile Trp Leu Asp Asn Val Arg Cys Ser Gly Glu Glu Gln Ser Leu Glu Gln Cys Gln His Arg Phe Trp Gly Phe His Asp Cys Thr His Gln Glu Asp Val Ala Val Ile Cys Ser Val <210> 149 <211> 24 <212> DNA <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic

oligonucleotide probe

<400> 149 ttcagctcat caccttcacc tgcc

<210> 150 <211> 24

<212> DNA

<213> Artificial Sequence

<223> Description of Artificial Sequence: Synthetic oligonucleotide probe

<400> 150

ggctcataca aaataccact aggg

<210> 151

<211> 50

<212> DNA <213> Artificial Sequence

<223> Description of Artificial Sequence: Synthetic oligonucleotide probe

gggcctccac cgctgtgaag ggcgggtgga ggtggaacag aaaggccagt

<210> 152

<211> 1427

<212> DNA

<213> Homo sapiens

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24

24

50

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<210> 153 <211> 310

<212> PRT

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10 <213> Homo sapiens

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Leu Gly Lys Glu Cys Ala Lys Val Phe Tyr Ala Ala Gly Ala Lys Leu 60

Val Leu Cys Gly Arg Asn Gly Gly Ala Leu Glu Glu Leu Ile Arg Glu son

Leu Thr Ala Ser His Ala Thr Lys Val Gln Thr His Lys Pro Tyr Leu

Val Thr Phe Asp Leu Thr Asp Ser Gly Ala Ile Val Ala Ala Ala Ala Val Thr Phe 100

Glu Ile Leu Gln Cys Phe Gly Tyr Val Asp Ile Leu Val Asn Asn Ala

Gly lle Ser Tyr Arg Gly Thr lle Met Asp Thr Thr Val Asp Val Asp

Lys Arg Val Met Glu Thr Asn Tyr Phe Gly Pro Val Ala Leu Thr Lys
160

Ala Leu Leu Pro Ser Met Ile Lys Arg Arg Gln Gly His Ile Val Ala

Ile Ser Ser Ile Gln Gly Lys Met Ser Ile Pro Phe Arg Ser Ala Tyr

Ala Ala Ser Lys His Ala Thr Gln Ala Phe Phe Asp Cys Leu Arg Ala 200

Glu Met Glu Gln Tyr Glu Ile Glu Val Thr Val Ile Ser Pro Gly Tyr

220	
215 210 Thr Ala Asp Gly Ser Arg	
Ile His Thr Asn Leu Ser Val Asn Ala Ile Thr Ala Asp Gly Ser Arg 240 Tyr Gly Val Met Asp Thr Thr Thr Ala Gln Gly Arg Ser Pro Val Glu 255 Val Ala Gln Asp Val Leu Ala Ala Val Gly Lys Lys Lys Lys Asp Val 265 Tle Leu Ala Asp Leu Leu Pro Ser Leu Ala Val Tyr Leu Arg Thr Leu 275	
The Leu Ala Asp Leu Leu 122 280 275 Ala Pro Gly Leu Phe Phe Ser Leu Met Ala Ser Arg Ala Arg Lys Glu 295 290 Arg Lys Ser Lys Asn Ser 310	
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<220> <223> Description of Artificial Sequence: Synthetic <223> Description of Probe oligonucleotide probe	

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<210> 157
<211> 50
<212> DNA
<213> Artificial Sequence
 <223> Description of Artificial Sequence: Synthetic
       oligonucleotide probe
                                                                    50
 aatggtgggg ccctagaaga gctcatcaga gaactcaccg cttctcatgc
  <210> 158
  <211> 1771
  <212> DNA
  <213> Homo sapiens
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   aaaaaaaaaa acacacaaa cgctcgcagc cacaaaaggg atgaaatttc ttctggacat 120
   cetectgett etecegttae tgategtetg etecetagag teettegtga agetttttat 180
   tcctaagagg agaaaatcag tcaccggcga aatcgtgctg attacaggag ctgggcatgg 240
   aattgggaga ctgactgcct atgaatttgc taaacttaaa agcaagctgg ttctctggga 300
   tataaataag catggactgg aggaaacagc tgccaaatgc aagggactgg gtgccaaggt 360
    tcataccttt gtggtagact gcagcaaccg agaagatatt tacagctctg caaagaaggt 420
    gaaggcagaa attggagatg ttagtattt agtaaataat gctggtgtag tctatacatc 480
    agatttgttt gctacacaag atcctcagat tgaaaagact tttgaagtta atgtacttgc 540
    acatttctgg actacaaagg catttcttcc tgcaatgacg aagaataacc atggccatat 600
    tgtcactgtg gcttcggcag ctggacatgt ctcggtcccc ttcttactgg cttactgttc 660
    aagcaagttt gctgctgttg gatttcataa aactttgaca gatgaactgg ctgccttaca 720
    aataactgga gtcaaaacaa catgtctgtg tcctaatttc gtaaacactg gcttcatcaa 780
     aaatccaagt acaagtttgg gacccactct ggaacctgag gaagtggtaa acaggctgat 840
     gcatgggatt ctgactgagc agaagatgat ttttattcca tcttctatag cttttttaac 900
     aacattggaa aggateette etgagegttt eetggeagtt ttaaaaegaa aaateagtgt 960
     taagtttgat gcagttattg gatataaaat gaaagcgcaa taagcaccta gttttctgaa 1020
     aactgattta ccaggtttag gttgatgtca tctaatagtg ccagaatttt aatgtttgaa 1080
     ettetgttt ttetaattat ceceatttet teaatateat ttttgagget ttggcagtet 1140
      tcatttacta ccacttgttc tttagccaaa agctgattac atatgatata aacagagaaa 1200
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Ile Phe Ile Pro Ser Ser Ile Ala Phe Leu Thr Thr Leu Glu Arg Ile Leu Pro Glu Arg Phe Leu Ala Val Leu Lys Arg Lys Ile Ser Val Lys 275 Phe Asp Ala Val Ile Gly Tyr Lys Met Lys Ala Gln <210> 160 <211> 23 <212> DNA <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic <220> oligonucleotide probe 23 <400> 160 ggtgaaggca gaaattggag atg <210> 161 <211> 24 <212> DNA <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic oligonucleotide probe the leaf 24 <400> 161 atcccatgca tcagcctgtt tacc <210> 162 Ü <211> 48 <212> DNA <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic oligonucleotide probe 48 gctggtgtag tctatacatc agatttgttt gctacacaag atcctcag <210> 163 <211> 2076 <212> DNA <213> Homo sapiens cccacgcgtc cgcggacgcg tgggtcgact agttctagat cgcgagcggc cgcccgcggc 60 tcagggagga gcaccgactg cgccgcaccc tgagagatgg ttggtgccat gtggaaggtg 120 attgtttcgc tggtcctgtt gatgcctggc ccctgtgatg ggctgtttcg ctccctatac 180 agaagtgttt ccatgccacc taagggagac tcaggacagc cattatttct caccccttac 240 attgaagetg ggaagateea aaaaggaaga gaattgagtt tggteggeee ttteccagga 300 ctgaacatga agagttatgc cggcttcctc accgtgaata agacttacaa cagcaacctc 360 ttettetggt tetteccage teagatacag ceagaagatg ceceagtagt tetetggeta 420 cagggtgggc cgggaggttc atccatgttt ggactctttg tggaacatgg gccttatgtt 480 gtcacaagta acatgacctt gcgtgacaga gacttcccct ggaccacaac gctctccatg 540 ctttacattg acaatccagt gggcacaggc ttcagtttta ctgatgatac ccacggatat 600 gcagtcaatg aggacgatgt agcacgggat ttatacagtg cactaattca gtttttccag 660 atatttcctg aatataaaaa taatgacttt tatgtcactg gggagtctta tgcagggaaa 720 tatgtgccag ccattgcaca cctcatccat tccctcaacc ctgtgagaga ggtgaagatc 780 aacctgaacg gaattgctat tggagatgga tattctgatc ccgaatcaat tatagggggc 840 tatgcagaat teetgtacca aattggettg ttggatgaga agcaaaaaaa gtaettecag 900 aagcagtgcc atgaatgcat agaacacatc aggaagcaga actggtttga ggcctttgaa 960 atactggata aactactaga tggcgactta acaagtgatc cttcttactt ccagaatgtt 1020 acaggatgta gtaattacta taactttttg cggtgcacgg aacctgagga tcagctttac 1080 tatgtgaaat ttttgtcact cccagaggtg agacaagcca tccacgtggg gaatcagact 1140 tttaatgatg gaactatagt tgaaaagtac ttgcgagaag atacagtaca gtcagttaag 1200 ccatggttaa ctgaaatcat gaataattat aaggttctga tctacaatgg ccaactggac 1260 atcategtgg cagetgeect gacagagege teettgatgg geatggactg gaaaggatee 1320 caggaataca agaaggcaga aaaaaaagtt tggaagatct ttaaatctga cagtgaagtg 1380 gctggttaca tccggcaagc gggtgacttc catcaggtaa ttattcgagg tggaggacat 1440 attttaccct atgaccagcc tetgagaget tttgacatga ttaatcgatt catttatgga 1500 aaaggatggg atccttatgt tggataaact accttcccaa aagagaacat cagaggtttt 1560 cattgctgaa aagaaaatcg taaaaacaga aaatgtcata ggaataaaaa aattatcttt 1620 tcatatctgc aagatttttt tcatcaataa aaattatcct tgaaacaagt gagcttttgt 1680 ttttgggggg agatgtttac tacaaaatta acatgagtac atgagtaaga attacattat 1740 ttaacttaaa ggatgaaagg tatggatgat gtgacactga gacaagatgt ataaatgaaa 1800 ttttagggtc ttgaatagga agttttaatt tcttctaaga gtaagtgaaa agtgcagttg 1860 taacaaacaa agctgtaaca tcttttctg ccaataacag aagtttggca tgccgtgaag 1920 gtgtttggaa atattattgg ataagaatag ctcaattatc ccaaataaat ggatgaagct 1980 ataatagttt tggggaaaag atteteaaat gtataaagte ttagaacaaa agaattettt 2040 2076 gaaataaaaa tattatatat aaaagtaaaa aaaaaa

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Ile Glu Ala Gly Lys Ile Gln Lys Gly Arg Glu Leu Ser Leu Val Gly
50 60

Pro Phe Pro Gly Leu Asn Met Lys Ser Tyr Ala Gly Phe Leu Thr Val

75
65 Pho
Asn Lys Thr Tyr Asn Ser Asn Leu Phe Phe Trp Phe Phe Pro Ala Gln 95 85
Ile Gln Pro Glu Asp Ala Pro Val Val Leu Trp Leu Gln Gly Gly Pro 100 The World Wal
Gly Gly Ser Ser Met Phe Gly Leu Phe Val Glu His Gly Pro Tyr Var
Val Thr Ser Asn Met Thr Leu Arg Asp Arg Asp Phe Pro Trp Thr Thr 130 130 130 130 130 130
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145 Phe Thr Asp Asp Thr His Gly Tyr Ala Val Asn Glu Asp Asp Val Ala 175 165
Arg Asp Leu Tyr Ser Ala Leu Ile Gln Phe Phe Gln Ile Phe Pro Glu 180 185
Tyr Lys Asn Asn Asp Phe Tyr Val Thr Gly Glu Ser Tyr Ala Gly Lys 205 200 195
Tyr Val Pro Ala Ile Ala His Leu Ile His Ser Leu Asn Pro Val Arg 210 210 210 210 210
Glu Val Lys Ile Asn Leu Asn Gly Ile Ala Ile Gly Asp Gly Tyr Ser
Asp Pro Glu Ser Ile Ile Gly Gly Tyr Ala Glu Phe Leu Tyr Gln Ile 255 245
Gly Leu Leu Asp Glu Lys Gln Lys Lys Tyr Phe Gln Lys Gln Cys His
Glu Cys Ile Glu His Ile Arg Lys Gln Asn Trp Phe Glu Ala Phe Glu 280 280
Ile Leu Asp Lys Leu Leu Asp Gly Asp Leu Thr Ser Asp Pro Ser Tyr
phe Gln Asn Val Thr Gly Cys Ser Asn Tyr Tyr Asn Phe Leu Arg Cys 320
Thr Glu Pro Glu Asp Gln Leu Tyr Tyr Val Lys Phe Leu Ser Leu Pro 335 325
Glu Val Arg Gln Ala Ile His Val Gly Asn Gln Thr Phe Asn Asp Gly 350 340

	Thr Ile Val Glu Lys Tyr Leu Arg Glu Asp Thr Val Gln Ser Val Lys 365 Pro Trp Leu Thr Glu Ile Met Asn Asn Tyr Lys Val Leu Ile Tyr Asn 370 Gly Gln Leu Asp Ile Ile Val Ala Ala Ala Leu Thr Glu Arg Ser Leu 400 385 Met Gly Met Asp Trp Lys Gly Ser Gln Glu Tyr Lys Lys Ala Glu Lys 415 Lys Val Trp Lys Ile Phe Lys Ser Asp Ser Glu Val Ala Gly Tyr Ile 425 Arg Gln Ala Gly Asp Phe His Gln Val Ile Ile Arg Gly Gly Gly His 445											
	The Leu Pro Tyr Asp Gln Pro Leu Arg Ala Phe Asp Met Ile Ash Arg 450 Phe Ile Tyr Gly Lys Gly Trp Asp Pro Tyr Val Gly 465 210> 165 211> 24 212> DNA 213> Artificial Sequence 220> 223> Description of Artificial Sequence: Synthetic oligonucleotide probe											
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   tettgetgga gaagaaaggg etgagggeag ageagggeae teteaeteag ggtgaeeage 180
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35

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Leu Glu Val Asp Ser Arg Ser Val Val Leu Leu Ser Val Val Trp Val 65 70 80

Leu Leu Ala Pro Pro Ala Ala Gly Met Pro Gln Phe Ser Thr Phe His
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85

Ser Glu Asn Arg Asp Trp Thr Phe Asn His Leu Thr Val His Gln Gly
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Thr Gly Ala Val Tyr Val Gly Ala Ile Asn Arg Val Tyr Lys Leu Thr
115

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Asn Lys Ser Arg Tyr Pro Pro Leu Ile Val Gln Pro Cys Ser Glu Val 145

Leu Thr Leu Thr Asn Asn Val Asn Lys Leu Leu Ile Ile Asp Tyr Ser 170

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 - Lys Ala Pro Val Pro Ile Asp Asp Asn Phe Cys Gly Leu Asp Ile Asn

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Tyr Ser Val Val Phe Val	Gly Thr Lys Ser Gly Lys Leu Lys Lys Val 510 505	
Arg Val Tyr Glu Phe Arg 515	Cys Ser Asn Ala Ile His Leu Leu Ser Lys 525 520 Trp Arg Phe Asn Tyr Arg Gln	
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Ala Lys Gly Trp Asn Phe Met Leu Glu Asp Ser Thr Phe Trp Ile Phe 55

Gly Gly Ser Ile His Tyr Phe Arg Val Pro Arg Glu Tyr Trp Arg Asp

Arg Leu Leu Lys Met Lys Ala Cys Gly Leu Asn Thr Leu Thr Thr Tyr

Val Pro Trp Asn Leu His Glu Pro Glu Arg Gly Lys Phe Asp Phe Ser 105 100

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Leu Trp Val Ile Leu Arg Pro Gly Pro Tyr Ile Cys Ser Glu Met Asp 130

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Pro	Ala 210	Tyr	Met	Pro	Tyr	Val 215	Lys	Lys	Ala	Leu	Glu 220	Asp	Arg	Gly	Ile
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Ser	Asp	Val	Thr 340		Tyr	Asp	Tyr	Asp 345	Ala	. Val	Leu	Thr	350	Ala	. Gly
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Ser	Gly 370		Pro	Leu	Pro	9 Pro 375) Pro	Asp	Leu	1 Let 380	Pro	ь Гув	Met	. Pro
Tyr 385		Pro	Leu	Thr	9rc 390		Leu	туг	Lei	395		ı Trp	Asp	Ala	400
Lys	туг	Leu	ı Gly	Glu 405		o Il∈	e Lys	s Ser	Glu 410		Pro	o Ile	e Asr	415	Gli
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<213> Homo sapiens

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Val Phe Asp Leu Thr Asp Leu Asp Val Leu Lys Leu Glu Leu Ile Pro 130 135 140

Glu Ala Lys Ile Pro Ala Lys Ile Ser Gln Met Thr Asn Leu Gln Glu 145 150 155 160

Leu His Leu Cys His Cys Pro Ala Lys Val Glu Gln Thr Ala Phe Ser 165 170 175

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<213> Homo sapiens

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Gly Leu Ser Leu Ala Gly Lys Asp Gln Val Glu Thr Ala Leu Lys Ala 75

Ser Phe Glu Thr Cys Ser Tyr Gly Trp Val Gly Asp Gly Phe Val Val

Ile Ser Arg Ile Ser Pro Asn Pro Lys Cys Gly Lys Asn Gly Val Gly 105

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Arg Arg Ser Ile Thr Val Glu Gln His Ile Gly Asn Ile Phe Met Phe 85 90 95

Ser Lys Val Ala Asn Thr Ile Leu Phe Phe Arg Leu Asp Ile Arg Met 100 105 110

Gly Leu Leu Tyr Ile Thr Leu Cys Ile Val Phe Leu Met Thr Cys Lys 115 120 125

Pro Pro Leu Tyr Met Gly Pro Glu Tyr Ile Lys Tyr Phe Asn Asp Lys 130 135

Thr Ile Asp Glu Glu Leu Glu Arg Asp Lys Arg Val Thr Trp Ile Val 145 150 155 160

Glu Phe Phe Ala Asn Trp Ser Asn Asp Cys Gln Ser Phe Ala Pro Ile 165 170 175

Tyr Ala Asp Leu Ser Leu Lys Tyr Asn Cys Thr Gly Leu Asn Phe Gly 180 185 190

Lys Val Asp Val Gly Arg Tyr Thr Asp Val Ser Thr Arg Tyr Lys Val

Ser Thr Ser Pro Leu Thr Lys Gln Leu Pro Thr Leu Ile Leu Phe Gln 210 215 220

Gly Gly Lys Glu Ala Met Arg Arg Pro Gln Ile Asp Lys Lys Gly Arg 225 230 235 240

Ala Val Ser Trp Thr Phe Ser Glu Glu Asn Val Ile Arg Glu Phe Asn 245 250 255

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Ser Val Ile Leu Pro Cys Arg Tyr Arg Tyr Glu Pro Ala Leu Val Ser 70 65

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Asn Ser Asn Thr Gly Lys Ala Leu Lys His Thr Ala Gln Lys Phe Phe

245

250

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Thr Ala Val Pro Pro Ala Leu Pro Ala Gly Thr Gln Thr Leu Leu

Leu Gln Ser Asn Ser Ile Val Arg Val Asp Gln Ser Glu Leu Gly

Tyr Leu Ala Asn Leu Thr Glu Leu Asp Leu Ser Gln Asn Ser Phe

Ser Asp Ala Arg Asp Cys Asp Phe His Ala Leu Pro Gln Leu Leu 115 110

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Ph∈	e His	s His	s Leu	335		Met	. Glu	ı Thi	Leu 340	Met	Leu	Asn	Asn	Asn 345
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Thr Pro Ala His	Ala Gly Ar 470	g Arg Tyr A 4	arg Val Tyr Pro G 175	lu Gly 480
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Ser Val Val Val	Gly Arg Al	la Leu Leu (Gln Pro Gly Arg <i>I</i> 520	Asp Glu 525
Gly Gln Gly Leu	Glu Leu Ai 530	rg Val Gln (Glu Thr His Pro 5 535	Tyr His 540
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Leu Thr Trp Se	r Ser Ala S 560	er Ser Leu i	Arg Gly Gln Gly 2 565	Ala Thr 570
Ala Leu Ala Arg	g Leu Pro A 575	rg Gly Thr	His Ser Tyr Asn 580	Ile Thr 585
Arg Leu Leu Gl	n Ala Thr G 590	lu Tyr Trp	Ala Cys Leu Gln 595	Val Ala 600
Phe Ala Asp Al	a His Thr G 605	In Leu Ala	Cys Val Trp Ala 610	Arg Thr 615
Lys Glu Ala Th	r Ser Cys E 620	His Arg Ala	Leu Gly Asp Arg 625	Pro Gly 630
Leu Ile Ala Il	e Leu Ala I 635	Leu Ala Val	Leu Leu Leu Ala 640	Ala Gly 645
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Gly Arg Arg Pr	o Leu Pro I 665	Pro Ala Trp	Ala Phe Trp Gly 670	Trp Ser 675

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Cys Ala His Pro Leu Ala Thr Leu Phe Lys Ile Leu Ala Ser Phe 50

Tyr Ile Ser Leu Val Ile Phe Tyr Gly Leu Ile Cys Met Tyr Thr

Leu Trp Trp Met Leu Arg Arg Ser Leu Lys Lys Tyr Ser Phe Glu 80

Ser Ile Arg Glu Glu Ser Ser Tyr Ser Asp Ile Pro Asp Val Lys

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Asn	Lys	; 1	Leu	Arg	Gln 140	Leu	Asn	Leu	Asn	Asn 145	Glu	Trp	Thr	Leu	Asp 150
Lys	Let	1 7	Arg	Gln	Arg 155	Leu	Thr	Lys	Asn	Ala 160	Gln	Asp	Lys	Leu	Glu 165
Leu	His	s :	Leu	Phe	Met 170	Leu	Ser	Gly	Ile	Pro 175	Asp	Thr	Val	Phe	Asp 180
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Thr	11	е	Pro	Pro	Ser 200		Ala	Gln	Lev	1 Thr 205	Gly	Leu	Lys	Glu	Leu 210
Trp	Le	u	Туr	His	Thr 215	Ala	Ala	Lys	: Ile	e Glu 220	Ala	Pro	Ala	Leu	Ala 225
Phe	Le	u	Arg	g Glu	Asn 230		ı Arg	, Ala	a Let	1 His 239	s Il∈	. Lys	Phe	. Thr	Asp 240
11ϵ	ь Гу	rs	Glu	ılle	Pro 245	Lei	ı Trg) Ile	э Ту:	r Sei 250	Leu)	ı Lys	Thr	Leu	Glu 255
Glı	ı Le	eu	His	s Lev	1 Thi 260		y Ası	ı Lei	ı Se	r Ala 26	a Glu 5	ı Asr	a Asr	n Arg	7yr 270
116	e Va	al	Ιle	e Asp	Gly 279		u Arg	g Gl	u Le	u Ly 28	s Arg	g Lei	ı Ly:	s Val	Leu 285
Arg	g Le	eu	Lys	s Sei	r Ası	n Le	u Se	r Ly	s Le	u Pr	o Gl	n Va	l Va	1 Thi	r Asp
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Ly	s L	eu	Il	e Va	1 Le 32	u As O	n Se	r Le	u Ly	rs Ly 32	s Me	t Al	a As	n Le	u Thr 330
G1	u L	eu	G1	u Le	u Il 33	e Ar	g Cy	s As	sp Le	eu G1 34	u Ar 10	g Il	e Pr	o Hi	s Ser 345
11	e P	he	. Se	r Le	u Hi 35		n L∈	eu Gl	n G	lu II 35	e As	p Le	и Бу	s As	p Asn 360

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Arg Leu Thr Cys Leu Lys Leu Trp Tyr Asn His Ile Ala Tyr Ile 380 385
Pro Ile Gln Ile Gly Asn Leu Thr Asn Leu Glu Arg Leu Tyr Leu 395 400 405
Asn Arg Asn Lys Ile Glu Lys Ile Pro Thr Gln Leu Phe Tyr Cys 410 415 420
Arg Lys Leu Arg Tyr Leu Asp Leu Ser His Asn Asn Leu Thr Phe 435
Leu Pro Ala Asp Ile Gly Leu Leu Gln Asn Leu Gln Asn Leu Ala 440 445 450
Ile Thr Ala Asn Arg Ile Glu Thr Leu Pro Pro Glu Leu Phe Gln 455 460 465
Cys Arg Lys Leu Arg Ala Leu His Leu Gly Asn Asn Val Leu Gln 470 475 480
Ser Leu Pro Ser Arg Val Gly Glu Leu Thr Asn Leu Thr Gln Ile 485 490 495
Glu Leu Arg Gly Asn Arg Leu Glu Cys Leu Pro Val Glu Leu Gly 500 505 510
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  gttatgtgaa tggtagtggt gcctatgcca aggacctggc tatggtggct 450
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<212> PRT

<213> Homo Sapien

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Trp Pro Thr Glu Glu Gly Lys Glu Val Trp Asp Tyr Val Thr Val

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Ser	Су	5 I	ГЛЗ	Asn	Phe 65	Ser	Glu	Leu	Pro	Leu 70	Val	Met	Trp	Leu	Gln 75
Gly	G1	y 1	Pro	Gly	Gly 80	Ser	Ser	Thr	Gly	Phe 85	Gly	Asn	Phe	Glu	Glu 90
Ile	Gl	У	Pro	Leu	Asp 95	Ser	Asp	Leu	Lys	Pro 100	Arg	Lys	Thr	Thr	Trp 105
Leu	Gl	n	Ala	Ala	Ser 110	Leu	Leu	Phe	Val	Asp 115	Asn	Pro	Val	Gly	Thr 120
Gly	Ph	e	Ser	Tyr	Val	Asn	Gly	Ser	Gly	Ala 130	Tyr	Ala	Lys	Asp	Leu 135
Ala	Μe	ŧt	Val	Ala	Ser	Asp	Met	Met	. Val	Leu 145	Leu ;	Lys	Thr	Phe	Phe 150
Ser	. GZ	/S	His	Lys	Glu 155	Phe	e Glr	Thi	r Val	160	Phe	туг	: Ile	Phe	Ser 165
Glu	ı Se	er	туг	Gly	Gly	Lys	s Met	. Ala	a Ala	a Gly 179	ıle 5	gly	, Leu	ı Glu	180
Туг	: L	ys	Ala	ılle	Glr 189		g Gly	y Th:	r Il	e Ly:	s Cys	s Ası	n Phe	e Ala	195
Va]	L A	la	Let	ı Gly	/ Asj		r Tr	p Il	e Se	r Pr	o Va: 5	l As	p Sei	r Vai	1 Leu 210
Se	r T	rp	Gl	y Pro	ту: 21	r Le 5	u Ty	r Se	r Me	t Se 22	r Le	u Le	u Gl	u Asj	p Lys 225
Gl	у L	eu	. Ala	a Gl	ע Va 23	l Se O	r Ly	s Va	.1 Al	a Gl 23	u Gl 5	n Va	l Le	u As	n Ala 240
Va	1 A	sn	Lу	s Gl	y Le 24	u Ту 5	r Ar	g Gl	u Al	a Th	ır Gl 50	u Le	u Tr	p Gl	y Lys 255
Al	a C	slu	ı Me	t Il	e Il 26	e Gl	.u G1	n As	sn Th	r As 26	sp Gl 55	y Va	ıl As	n Ph	e Tyr 270
As	n I	[]6	e Le	u Th	r Ly 27	rs Se '5	er Th	ır Pı	co Tl	ır Se 28	er Th	ır Me	et Gl	.u Se	er Ser 285
Le	eu (Glι	ı Ph	e Th	r G] 29	.n Se 90	er Hi	is L	eu V	al Cy 2:	ys Le 95	eu Cy	ys G]	ln Ar	g His 300
٧ã	al i	Ar	g Hi	s Le	eu Gl	ln A	rg A	sp A	la L	eu S	er G	ln Le	eu Me	et As	sn Gly

305 310 315
Pro Ile Arg Lys Leu Lys Ile Ile Pro Glu Asp Gln Ser Trp 320 325 330
Gly Gly Gln Ala Thr Asn Val Phe Val Asn Met Glu Glu Asp Phe 335
Met Lys Pro Val Ile Ser Ile Val Asp Glu Leu Leu Glu Ala Gly 350 355 360
Ile Asn Val Thr Val Tyr Asn Gly Gln Leu Asp Leu Ile Val Asp 375
Thr Met Gly Gln Glu Ala Trp Val Arg Lys Leu Lys Trp Pro Glu 380 385 390
Leu Pro Lys Phe Ser Gln Leu Lys Trp Lys Ala Leu Tyr Ser Asp 395 400 405
Pro Lys Ser Leu Glu Thr Ser Ala Phe Val Lys Ser Tyr Lys Asn 410 415 420
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Gly Pro Cys Gly Arg Arg Val Ile Thr Ser Arg Ile Val Gly Gly 35

Glu Asp Ala Glu Leu Gly Arg Trp Pro Trp Gln Gly Ser Leu Arg

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<211> 314

<212> PRT

<213> Homo Sapien

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Val Ser	Asn	Ile	Туг 125	Leu	Ser	Pro	Arg	Tyr 130	Leu	Gly	Asn	Ser	Pro 135
Tyr Asp	Ile	Ala	Leu 140	Val	Lys	Leu	Ser	Ala 145	Pro	Val	Thr	Tyr	Thr 150
Lys His	Ile	Gln	Pro 155	Ile	Cys	Leu	Gln	Ala 160	Ser	Thr	Phe	Glu	Phe 165
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Glu Asp	Glu	Ala	Leu 185	Pro	Ser	Pro	His	Thr 190	Leu	Gln	Glu	Val	Gln 195
Val Ala	Ile	Ile	Asn 200	Asn	Ser	Met	Cys	Asn 205	His	Leu	Phe	Leu	Lys 210
Tyr Ser	Phe	Arg	Lys 215	Asp	Ile	Phe	Gly	Asp 220	Met	Val	Cys	Ala	Gly 225
Asn Ala	a Glr	Gly	Gly 230	Lys	a Asp	Ala	Cys	Phe 235	Gly	Asp	Ser	Gly	Gly 240
Pro Lei	ı Ala	a Cys	Asr 245		s Asr	ı Gly	, Leu	Trp 250	y Tyr	Gln	Ile	Gly	Val 255
Val Se	r Trp	o Gly	Val		у Суя	s Gly	y Arg	9 Pro 265	Asr	a Arg	Pro	Gly	7 Val 270
Tyr Th	r Ası	n Ile	Sei 27!	c His	s His	s Phe	e Glı	ı Trj 280	o Ile	e Glr	ı Lys	s Lev	Met 285
Ala Gl	n Se	r Gly	7 Met		r Gl	n Pr	o Ası	29	o Sei 5	r Trp) Pro	Lei	1 Leu 300
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Leu	Ser	Glu	Leu	Val 65	Gln	Ala	Val	Ser	Asp 70	Pro	Ser	Ser	Pro	Gln 75
Tyr	Gly	Lys	Tyr	Leu 80	Thr	Leu	Glu	Asn	Val 85	Ala	Asp	Leu	Val	Arg 90
Pro	Ser	Pro	Leu	Thr 95	Leu	His	Thr	Val	Gln 100	Lys	Trp	Leu	Leu	Ala 105
Ala	Gly	Ala	Gln	Lys 110	Cys	His	Ser	Val	Ile 115	Thr	Gln	Asp	Phe	Leu 120
Thr	Cys	Trp	Leu	Ser 125	Ile	Arg	Gln	Ala	Glu 130	Leu	Leu	Leu	Pro	Gly 135
Ala	Glu	Phe	His	His 140	Tyr	Val	Gly	Gly	Pro 145	Thr	Glu	Thr	His	Val 150
Val	Arg	Ser	Pro	His 155	Pro	Tyr	Gln	Leu	Pro 160	Gln	Ala	Leu	Ala	Pro 165
His	Val	Asp	Phe	Val 170		Gly	Leu	His	175	Phe	Pro	Pro	Thr	Ser 180
Ser	Leu	Ar <u>q</u>	g Glr	Arg 185		Glu	Pro	Gln	190	Thr	Gly	Thr	Val	. Gly 195
Leu	ı His	Let	ı Gly	7 Val 200		Pro	Ser	Val	11e 205	e Arg	l Lys	Arg	Tyr	Asn 210
Leu	ı Thı	s Sei	r Glı	a Asp 215		Gly	ser Ser	Gly	7 Thi 220	Ser	. Asr	a Asr	n Ser	Gln 225
Ala	а Суя	s Ala	a Glı	n Phe 230		ı Glu	ı Glr	туі	235	e His	s Asp	Sei	: Asp	240
Ala	a Glı	n Ph	e Me	245		ı Phe	e Gly	/ Gly	y Ası 250	n Phe 0	e Alá	a Hi:	∃ Glı	n Ala 255
Se:	r Va	l Al	a Ar	g Val 260		l Gly	y Gli	n Gli	n Gl	y Arg	g Gly	y Ar	g Ala	a Gly 270
11	e Gl	u Al	a Se	r Let 27!		o Vai	l Gli	n Ty:	r Le	u Mei 0	t Se:	r Al	a Gl	y Ala 285

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Ala	Leu	Pro	His	Val 320	His	Thr	Val	Ser	Tyr 325	Gly	Asp	Asp	Glu	Asp 330
Ser	Leu	Ser	Ser	Ala 335	Tyr	Ile	Gln	Arg	Val 340	Asn	Thr	Glu	Leu	Met 345
Lys	Ala	Ala	Ala	Arg 350	Gly	Leu	Thr	Leu	Leu 355	Phe	Ala	Ser	Gly	Asp 360
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Pro	Thr	Phe	Pro	Ala 380	Ser	Ser	Pro	Tyr	Val 385	Thr	Thr	Val	Gly	Gly 390
Thr	Ser	Phe	Gln	Glu 395	Pro	Phe	Leu	Ile	Thr 400	Asn	Glu	Ile	Val	Asp 405
Tyr	Ile	Ser	Gly	Gly 410	Gly	Phe	Ser	Asn	Val 415	Phe	Pro	Arg	Pro	Ser 420
Tyr	Gln	Glu	Glu	Ala 425	Val	Thr	Lys	Phe	Leu 430	Ser	Ser	Ser	Pro	His 435
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Asp	Val	Ala	Ala	Leu 455		Asp	Gly	Tyr	Trp 460	Val	Val	. Ser	Asn	Arg 465
Val	Pro	ıle	Pro	Trp		Ser	Gly	Thr	Ser 475	Ala	Ser	Thr	Pro	Val 480
Phe	Gly	gly	, Ile	Leu 485		Leu	Ile	Asn	Glu 490	His	arç	j Il∈	e Leu	Ser 495
Gly	Arg	g Pro) Pro	500		Phe	. Leu	. Asn	505	Arg	j Lev	1 Ту1	Glr	510
His	Gl	/ Ala	a Gly	7 Leu 515		. Asp	Val	Thr	520	g Gly	у Суя	s His	s Glu	Ser 525
Cys	Let	ı Ası	o Glu	ı Glü 530		. Glu	ı Gly	/ Glr	1 Gly 53!	y Phe	э Суя	s Sei	r Gly	7 Pro 540
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<213> Homo Sapien

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gatttcaacg tggctgtcag aatcactcct ctcaaatatg cccagatttg 1200
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tttaagcagt ttgaaggcat acttttgcat agaaataaaa aaaatactga 1500
ttttggggcaa tgaggaatat ttgacaatta agttaatctt cacgtttttg 1550
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<210> 261 <211> 383 <212> PRT <213> Homo Sapien

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Thr Trp Pro Ala Tyr Arg Leu Pro Val Val Leu Pro Gln Ser Thr 35 40 45

Leu Asn Leu Ala Lys Pro Asp Phe Gly Ala Glu Ala Lys Leu Glu
50 55 60

Val Ser Ser Cys Gly Pro Gln Cys His Lys Gly Thr Pro Leu 65 70 75

Pro Thr Tyr Glu Glu Ala Lys Gln Tyr Leu Ser Tyr Glu Thr Leu 80 85 90

Tyr Ala Asn Gly Ser Arg Thr Glu Thr Gln Val Gly Ile Tyr Ile

95 100 105

Leu Ser Ser Ser Gly Asp Gly Ala Gln His Arg Asp Ser Gly Ser 110 115

Ser	Gly	Lys	Ser	Arg 125	Arg	Lys	Arg	Gln	Ile 130	Tyr	Gly	Tyr	Asp	Ser 135
Arg	Phe	Ser	Ile	Phe 140	Gly	Lys	Asp	Phe	Leu 145	Leu	Asn	Tyr	Pro	Phe 150
Ser	Thr	Ser	Val	Lys 155	Leu	Ser	Thr	Gly	Cys 160	Thr	Gly	Thr	Leu	Val 165
Ala	Glu	Lys	His	Val 170	Leu	Thr	Ala	Ala	His 175	Cys	Ile	His	Asp	Gly 180
Lys	Thr	Tyr	Val	Lys 185	Gly	Thr	Gln	Lys	Leu 190	Arg	Val	Gly	Phe	Leu 195
Lys	Pro	Lys	Phe	Lys 200	Asp	Gly	Gly	Arg	Gly 205	Ala	Asn	Asp	Ser	Thr 210
Ser	Ala	Met	Pro	Glu 215	Gln	Met	Lys	Phe	Gln 220	Trp	Ile	Arg	Val	Lys 225
Arg	Thr	His	Val	Pro 230	Lys	Gly	Trp	Ile	Lys 235	Gly	Asn	Ala	Asn	Asp 240
Ile	Gly	Met	Asp	Tyr 245	Asp	Tyr	Ala	Leu	Leu 250	Glu	Leu	Lys	Lys	Pro 255
His	Lys	Arg	Lys	Phe 260	Met	Lys	Ile	Gly	Val 265	Ser	Pro	Pro	Ala	Lys 270
Gln	Leu	Pro	Gly	Gly 275	Arg	Ile	His	Phe	Ser 280	Gly	Tyr	Asp	Asn	Asp 285
Arg	Pro	Gly	Asn	Leu 290	Val	Tyr	Arg	Phe	Cys 295	Asp	Val	Lys	Asp	Glu 300
Thr	Tyr	Asp	Leu	Leu 305	Tyr	Gln	Gln	Cys	Asp 310	Ala	Gln	Pro	Gly	Ala 315
Ser	Gly	Ser	Gly	Val 320	Tyr	Val	Arg	Met	Trp 325	Lys	Arg	Gln	Gln	Gln 330
Lys	Trp	Glu	Arg	Lys 335	Ile	Ile	Gly	Ile	Phe 340	Ser	Gly	His	Gln	Trp 345
Val	Asp	Met	Asn	Gly 350	Ser	Pro	Gln	Asp	Phe 355	Asn	Val	Ala	Val	Arg 360
Ile	Thr	Pro	Leu	Lys 365	Tyr	Ala	Gln	Ile	Cys 370	Tyr	Trp	Ile	Lys	Gly 375
Asn	Tyr	Leu	Asp	Cys 380	Arg	Glu	Gly							

<210> 262 <211> 1378 <212> DNA <213> Homo Sapien

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<210> 263

<211> 317

<212> PRT

<213> Homo Sapien

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Ser Ile His Leu Pro Pro Asn Thr His Cys Trp Ile Ser Gly Trp

170

175

180

Gly Ser	Ile	Gln	Asp 185	Gly	Val	Pro	Leu	Pro 190	His	Pro	Gln	Thr	Leu 195
Gln Lys	Leu	Lys	Val 200	Pro	Ile	Ile	Asp	Ser 205	Glu	Val	Cys	Ser	His 210
Leu Tyr	Trp	Arg	Gly 215	Ala	Gly	Gln	Gly	Pro 220	Ile	Thr	Glu	Asp	Met 225
Leu Cys	Ala	Gly	Tyr 230	Leu	Glu	Gly	Glu	Arg 235	Asp	Ala	Cys	Leu	Gly 240
Asp Ser	Gly	Gly	Pro 245	Leu	Met	Cys	Gln	Val 250	Asp	Gly	Ala	Trp	Leu 255
Leu Ala	Gly	Ile	Ile 260	Ser	Trp	Gly	Glu	Gly 265	Cys	Ala	Glu	Arg	Asn 270
Arg Pro	Gly	Val	Tyr 275	Ile	Ser	Leu	Ser	Ala 280	His	Arg	Ser	Trp	Val 285
Glu Lys	Ile	Val	Gln 290	Gly	Val	Gln	Leu	Arg 295	Gly	Arg	Ala	Gln	Gly 300
Gly Gly	Ala	Leu	Arg 305	Ala	Pro	Ser	Gln	Gly 310	Ser	Gly	Ala	Ala	Ala 315
Arg Ser													
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<213> Artificial Sequence
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<223> Synthetic Oligonucleotide Probe
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<210> 273
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 <400> 273
 tactgggtgg tcagcaac 18
 <210> 274
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<210> 277
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  atgctgtgtg ccggctact 119
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<210> 285

<211> 463

<212> PRT

<213> Homo Sapien

<400> 285

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Glu Glu Lys Arg Leu Met Val Glu Leu His Asn Leu Tyr Arg Ala 45 35

Gln Val Ser Pro Thr Ala Ser Asp Met Leu His Met Arg Trp Asp

Glu Glu Leu Ala Ala Phe Ala Lys Ala Tyr Ala Arg Gln Cys Val

Trp Gly His Asn Lys Glu Arg Gly Arg Gly Glu Asn Leu Phe

Ala Ile Thr Asp Glu Gly Met Asp Val Pro Leu Ala Met Glu Glu 105

Trp His His Glu Arg Glu His Tyr Asn Leu Ser Ala Ala Thr Cys

Ser Pro Gly Gln Met Cys Gly His Tyr Thr Gln Val Val Trp Ala 130 125

Lys T	hr	Glu	Arg	Ile 140	Gly	Cys	Gly	Ser	His 145	Phe	Cys	Glu	Lys	Leu 150
Gln G	ly	Val	Glu	Glu 155	Thr	Asn	Ile	Glu	Leu 160	Leu	Val	Cys	Asn	Tyr 165
Glu F	ro	Pro	Gly	Asn 170	Val	Lys	Gly	Lys	Arg 175	Pro	Tyr	Gln	Glu	Gly 180
Thr E	?ro	Cys	Ser	Gln 185	Cys	Pro	Ser	Gly	Tyr 190	His	Суз	Lys	Asn	Ser 195
Leu (Cys	Glu	Pro	Ile 200	Gly	Ser	Pro	Glu	Asp 205	Ala	Gln	Asp	Leu	Pro 210
Tyr I	Ĺeu	Val	Thr	Glu 215	Ala	Pro	Ser	Phe	Arg 220	Ala	Thr	Glu	Ala	Ser 225
Asp s	ser	Arg	Lys	Met 230	Gly	Thr	Pro	Ser	Ser 235	Leu	Ala	Thr	Gly	Ile 240
Pro 2	Ala	Phe	Leu	Val 245	Thr	Glu	Val	Ser	Gly 250	Ser	Leu	Ala	Thr	Lys 255
Ala	Leu	Pro	Ala	Val 260	Glu	Thr	Gln	Ala	Pro 265	Thr	Ser	Leu	Ala	Thr 270
Lys	Asp	Pro	Pro	Ser 275		Ala	Thr	Glu	Ala 280	Pro	Pro	Cys	Val	Thr 285
Thr	Glu	Val	. Pro	Ser 290		Leu	Ala	Ala	His 295	Ser	Leu	Pro	Ser	Leu 300
Asp	Glu	ı Glu	ı Pro	Val 305		Phe	Pro	Lys	310	Thr	His	val	Pro	315
Pro	Lys	Sei	: Ala	320		Val	Thr	Asp	325	Thr	Lys	val	l Pro	330
Arg	Ser	r Pro	o Glu	1 Asr 335		Lev	ı Asp	Pro	340	Met	Sei	. Lei	ı Thr	345
Ala	Arg	g Glı	ı Leı	ı Lei 350		His	s Ala	a Glr	1 Glu 355	ı Glu 5	ı Ala	a Glu	u Ala	360
Ala	Glu	ı Le	u Pro	o Pro 369		: Sei	c Glu	ı Va	1 Let 370	ı Ala	a Se:	r Va	l Phe	9 Pro 375
Ala	Gli	n Asj	р Lу	s Pro		/ Glu	ı Le	ı Glı	n Ala 38	a Thi	r Le	u As	p Hi	390
Gly	Hi	s Th	r Se	r Se:		s Sei	r Le	u Pr	o As:	n Ph	e Pr	o As	n Th	r Ser 405

Ala Thr Ala Asn Ala Thr Gly Gly Arg Ala Leu Ala Leu Gln Ser 415 410 Ser Leu Pro Gly Ala Glu Gly Pro Asp Lys Pro Ser Val Val Ser 430 425 Gly Leu Asn Ser Gly Pro Gly His Val Trp Gly Pro Leu Leu Gly Leu Leu Leu Pro Pro Leu Val Leu Ala Gly Ile Phe 455 <210> 286 <211> 19 <212> DNA <213> Artificial Sequence <220> <223> Synthetic Oligonucleotide Probe <400> 286 tcctgcagtt tcctgatgc 19 <210> 287 <211> 24 <212> DNA <213> Artificial Sequence <220> <223> Synthetic Oligonucleotide Probe <400> 287 ctcatattgc acaccagtaa ttcg 24 <210> 288 <211> 45 <212> DNA <213> Artificial Sequence <223> Synthetic Oligonucleotide Probe <400> 288 atgaggagaa acgtttgatg gtggagctgc acaacctcta ccggg 45 <210> 289 <211> 3662 <212> DNA <213> Homo Sapien <400> 289 gtaactgaag tcaggctttt catttgggaa gccccctcaa cagaattcgg 50

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<212> PRT

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Asn	Asn	Asn	Glu	Leu 50	Glu	Thr	Ile	Pro	Asn 55	Leu	Gly	Pro	Val	Ser 60
Ala	Asn	Ile	Thr	Leu 65	Leu	Ser	Leu	Ala	Gly 70	Asn	Arg	Ile	Val	Glu 75
Ile	Leu	Pro	Glu	His 80	Leu	Lys	Glu	Phe	Gln 85	Ser	Leu	Glu	Thr	Leu 90
Asp	Leu	Ser	Ser	Asn 95	Asn	Ile	Ser	Glu	Leu 100	Gln	Thr	Ala	Phe	Pro 105
Ala	Leu	Gln	Leu	Lys 110	Tyr	Leu	Tyr	Leu	Asn 115	Ser	Asn	Arg	Val	Thr 120
Ser	Met	Glu	Pro	Gly 125	Tyr	Phe	Asp	Asn	Leu 130	Ala	Asn	Thr	Leu	Leu 135
Val	Leu	Lys	Leu	Asn 140	Arg	Asn	Arg	Ile	Ser 145	Ala	Ile	Pro	Pro	Lys 150
Met	Phe	Lys	Leu	Pro	Gln	Leu	Gln	His	Leu	Glu	Leu	Asn	Arg	Asn
				155					160					165
Lys	Ile	. Lys	s Asn		Asp	Gly	Leu	Thr	Phe	Gln	Gly	Leu	Gly	Ala 180
Leu	Lys	s Ser	Leu	Lys 185		Gln	Arg	Asn	Gly 190	Val	Thr	Lys	Leu	Met 195
Asp	Gly	/ Ala	a Phe	Trp		Leu	Ser	Asn	Met 205	Glu	ılle	e Lev	Gln	Leu 210
Asp	His	s Ası	n Asr	Leu 215		Glu	ılle	Thr	Lys 220	Gly	Trp	Leu	Tyr	Gly 225
Leu	ı Leı	ı Me	t Lei	1 Glr 230		. Leu	ı His	Lev	235	Glr	n Ası	n Ala	ıle	Asn 240
Arg	g Il	e Se:	r Pro	245		Trp	o Glu	ı Phe	e Cys 250	s Glr	ı Lya	s Lei	ı Ser	Glu 255
Lei	u As	p Le	u Thi	r Phe 260		n His	s Let	ı Sei	26!	g Let 5	ı As	p As	ser Ser	Ser 270
Pho	e Le	u Gl	y Le	u Sei 27!		ı Leı	ı Ası	n Thi	r Let 28	u Hi: O	s Il	e Gl	y Asr	Asn 285
Ar	g Va	l Se	r Ty	r Il	e Ala	a Asj	р Су	s Ala	a Ph	e Ar	g Gl	y Le	u Sei	s Ser

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Glu	Asp	Met	Asn	Gly 320	Ala	Phe	Ser	Gly	Leu 325	Asp	Lys	Leu	Arg	Arg 330
Leu	Ile	Leu	Gln	Gly 335	Asn	Arg	Ile	Arg	Ser 340	Ile	Thr	Lys	Lys	Ala 345
Phe	Thr	Gly	Leu	Asp 350	Ala	Leu	Glu	His	Leu 355	Asp	Leu	Ser	Asp	Asn 360
Ala	Ile	Met	Ser	Leu 365	Gln	Gly	Asn	Ala	Phe 370	Ser	Gln	Met	Lys	Lys 375
Leu	Gln	Gln	Leu	His 380	Leu	Asn	Thr	Ser	Ser 385	Leu	Leu	Cys	Asp	Cys 390
Gln	Leu	Lys	Trp	Leu 395	Pro	Gln	Trp	Val	Ala 400	Glu	Asn	Asn	Phe	Gln 405
Ser	Phe	Val	Asn	Ala 410	Ser	Суз	Ala	His	Pro 415	Gln	Leu	Leu	Lys	Gly 420
Arg	Ser	Ile	Phe	Ala 425		Ser	Pro	Asp	Gly 430	Phe	Val	Cys	Asp	Asp 435
Phe	Pro	Lys	Pro	Gln 440		Thr	Val	Gln	Pro 445	Glu	Thr	Gln	Ser	Ala 450
Ile	Lys	Gly	ser Ser	Asn 455		ser	Phe	e Ile	460	Ser	Ala	Ala	ser	Ser 465
Ser	Asp	Ser	Pro	Met	Thr	Phe	e Ala	Trp	ь Гуя	. Lys	Asp) Asr	ı Glu	Leu
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Leu	ı His	a Asp	Ala	485	Met	: Glu	ı Ası	1 Туі	r Ala 490	His	Leu	ı Arg	g Ala	495
Gly	y Gly	/ Glu	ı Val	L Met		л Ту	r Thi	r Thi	r Ile 505	e Let	ı Arg	j Lei	ı Arg	g Glu 510
Va:	l Glu	ı Phe	e Ala	s Ser 51!		u Gl	у Гу	в Ту:	r Gli 520	n Cys	s Val	l Il	e Sei	r Asn 525
Hi	s Phe	e Gl	y Se:	r Se:		r Se	r Va	l Ly	s Ala 53!	а L y: 5	s Le	a Th	r Vai	1 Asn 540
Me	t Le	u Pr	o Se	r Ph		r Ly	s Th	r Pr	o Me	t As _] 0	p Le	u T h	r Il	e Arg 555

Ala Gly	Ala	Met	Ala 560	Arg	Leu	Glu	Cys	Ala . 565	Ala '	Val (Gly	His	Pro 570
Ala Pro	Gln	Ile	Ala 575	Trp	Gln	Lys	Asp	Gly 580	Gly	Thr	Asp	Phe	Pro 585
Ala Ala	Arg	Glu	Arg 590	Arg	Met	His	Val	Met 595	Pro	Glu	Asp	Asp	Val 600
Phe Phe	Ile	Val	Asp 605	Val	Lys	Ile	Glu	Asp 610	Ile	Gly	Val	Tyr	Ser 615
Cys Thr	Ala	Gln	Asn 620	Ser	Ala	Gly	Ser	Ile 625	Ser	Ala	Asn	Ala	Thr 630
Leu Thr	Val	Leu	Glu 635	Thr	Pro	Ser	Phe	Leu 640	Arg	Pro	Leu	Leu	Asp 645
Arg Thr	Val	Thr	Lys 650	Gly	Glu	Thr	Ala	Val 655	Leu	Gln	Сув	Ile	Ala 660
Gly Gly	Ser	Pro	Pro 665		Lys	Leu	Asn	Trp 670	Thr	Lys	Asp	Asp	Ser 675
Pro Leu	. Val	. Val	Thr 680		Arg	His	Phe	Phe 685	Ala	Ala	Gly	Asn	Gln 690
Leu Leu	ı Ile	: Ile	Val	Asr	Ser	: Asp	Val	Ser 700	Asp	Ala	Gly	Lys	Tyr 705
Thr Cys	s Glu	ı Met	Ser 710		1 Thr	Lev	ı Gly	715	Glu	Arg	Gly	Asn	Val 720
Arg Let	ı Sei	r Val	l Ile 729		o Thi	r Pro	Thr	730	Asp	Ser	Pro	Glr	Met 735
Thr Ala	a Pro	o Sei	r Let 74	ı Ası	p Asj	p Asp	o Gly	7 Trp 745	Ala	Thr	· Val	Gly	750
Val Il	e Il	e Al	a Va 75	1 Va 5	l Cya	в Су:	s Val	1 Val	l Gly	Thr	: Sei	c Lei	ı Val 765
Trp Va	l Va	1 11	e Il 77		r Hi	s Th	r Arg	g Arg 77	g Arg	g Asr	ı Glı	ı Ası	780
Ser Il	e Th	r As			p Gl	u Th	r As			o Ala	a As	p Il	e Pro 795
Ser Ty	r Le	eu Se	78 r Se 80	r Gl	n Gl	y Th	r Le	79 u Al 80	a Asj	p Arg	g Gl	n As	

Tyr	Val	Ser	Ser	Glu 815	Ser	Gly	Ser	His	His 820	Gln	Phe	Val	Thr	Ser 825
Ser	Gly	Ala	Gly	Phe 830	Phe	Leu	Pro	Gln	His 835	Asp	Ser	Ser	Gly	Thr 840
Cys	His	Ile	Asp	Asn 845	Ser	Ser	Glu	Ala	Asp 850	Val	Glu	Ala	Ala	Thr 855
Asp	Leu	Phe	Leu	Cys 860	Pro	Phe	Leu	Gly	Ser 865	Thr	Gly	Pro	Met	Tyr 870
Leu	Lys	Gly	Asn	Val 875	Tyr	Gly	Ser	Asp	Pro 880	Phe	Glu	Thr	Tyr	His 885
Thr	Gly	Cys	Ser	Pro 890	Asp	Pro	Arg	Thr	Val 895	Leu	Met	Asp	His	Tyr 900
Glu	Pro	Ser	Tyr	Ile 905	Lys	Lys	Lys	Glu	Cys 910	Tyr	Pro	Сув	Ser	His 915
Pro	Ser	Glu	Glu	Ser 920	Cys	Glu	Arg	Ser	Phe 925	Ser	Asn	Ile	Ser	Trp 930
Pro	Ser	His	Val	Arg 935	Lys	Leu	Leu	Asn	Thr 940	Ser	Tyr	Ser	His	Asn 945
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Asp	Phe	Ser	Ala	Asn 965		Glu	Pro	Ala	Ser 970	Val	Ala	Ser	Ser	975
Ser	Phe	Met	Gly	Thr 980		gly	Lys	Ala	Leu 985	Arg	Arç	y Pro	His	990
Asp	Ala	Туг	: Ser	Ser 995		e Gly	Gln	Pro	Ser 1000	Asp	Cys	s Glr	n Pro	Arg 1005
Ala	Phe	туг	Leu	1010		A His	s Ser	Ser	Pro 1015	Asp	Let	ı Ası	Ser	Gly 1020
Sei	Glu	ı Glu	ı Asp	Gly 1029		; Glu	a Arg	g Thr	1030	Phe	e Gli	n Glu	ı Glu	1 Asn 1035
His	s Ile	e Cys	∃ Thi	Phe 1040		s Glr	Thr	. Leu	1 Glu 1049	ı Ası	ту:	r Ar	g Thi	r Pro 1050
Ası	n Phe	e Gli	n Sei	r Ty:		o Let	ı As <u>r</u>	Th:	c					

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<212> PRT

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<400> 292

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Leu Ala Leu Gln Leu Leu Val Val Ala Gly Leu Val Arg Ala Gln

Thr Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val

Ile Cys Val Arg Lys Asn Leu Arg Glu Val Pro Asp Gly Ile Ser 65

Thr Asn Thr Arg Leu Leu Asn Leu His Glu Asn Gln Ile Gln Ile

Ile Lys Val Asn Ser Phe Lys His Leu Arg His Leu Glu Ile Leu

Gln Leu Ser Arg Asn His Ile Arg Thr Ile Glu Ile Gly Ala Phe 110

Asn Gly Leu Ala Asn Leu Asn Thr Leu Glu Leu Phe Asp Asn Arg 130

Leu Thr Thr Ile Pro Asn Gly Ala Phe Val Tyr Leu Ser Lys Leu 145 140

Lys Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser

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Tyr	Ala	Phe	Asn	Arg 170	Ile	Pro	Ser	Leu	Arg 175	Arg	Leu	Asp	Leu	Gly 180
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Leu	Ser	Asn	Leu	Arg 200	Tyr	Leu	Asn	Leu	Ala 205	Met	Cys	Asn	Leu	Arg 210
Glu	Ile	Pro	Asn	Leu 215	Thr	Pro	Leu	Ile	Lys 220	Leu	Asp	Glu	Leu	Asp 225
Leu	Ser	Gly	Asn	His 230	Leu	Ser	Ala	Ile	Arg 235	Pro	Gly	Ser	Phe	Gln 240
Gly	Leu	Met	His	Leu 245	Gln	Lys	Leu	Trp	Met 250	Ile	Gln	Ser	Gln	Ile 255
Gln	Val	Ile	Glu	Arg 260	Asn	Ala	Phe	Asp	Asn 265	Leu	Gln	Ser	Leu	Val 270
Glu	Ile	Asn	. Leu	Ala 275	His	Asn	Asn	Leu	Thr 280	Leu	Leu	Pro	His	Asp 285
Leu	Phe	Thr	Pro	Leu 290	His	His	Leu	Glu	Arg 295	Ile	His	Leu	His	His 300
Asn	Pro	Trp) Asn	Cys 305	Asn	Cys	Asp	Ile	Leu 310	Trp	Leu	Ser	Trp	Trp 315
				320					Ala 325					330
				335					340					345
				350)				355					360
				365	5				370)				375
				380)				385	•				390
				395	5				400)				405
Let	ı Se:	r As	p Gl	y Thi 410		ı Ası	n Phe	e Th	r Ası 41	n Vai	l Th:	r Va	l Gl	n Asp 420

Thr	Gly	Met	Tyr	Thr 425	Cys	Met	Val	Ser	Asn 430	Ser	Val	Gly	Asn	Thr 435
Thr	Ala	Ser	Ala	Thr 440	Leu	Asn	Val	Thr	Ala 445	Ala	Thr	Thr	Thr	Pro 450
Phe	Ser	Tyr	Phe	Ser 455	Thr	Val	Thr	Val	Glu 460	Thr	Met	Glu	Pro	Ser 465
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MEC	Top	1110							10					15
1				5					10					
Τ.				J										

Gln Ala Ala Glu Phe Asp Gly Arg Trp Pro Arg Gln Ile Val

Ser Ser Ile Gly Leu Cys Arg Tyr Gly Gly Arg Ile Asp Cys Cys

Trp Gly Trp Ala Arg Gln Ser Trp Gly Gln Cys Gln Pro Val Cys

Gln Pro Arg Cys Lys His Gly Glu Cys Ile Gly Pro Asn Lys Cys

Lys Cys His Pro Gly Tyr Ala Gly Lys Thr Cys Asn Gln Asp Leu 80

Asn Glu Cys Gly Leu Lys Pro Arg Pro Cys Lys His Arg Cys Met

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Asn Thr Tyr Gly Ser Tyr Lys Cys Tyr Cys Leu Asn Gly Tyr Met 115 110

Leu Met Pro Asp Gly Ser Cys Ser Ser Ala Leu Thr Cys Ser Met

Ala Asn Cys Gln Tyr Gly Cys Asp Val Val Lys Gly Gln Ile Arg 145

Cys Gln Cys Pro Ser Pro Gly Leu His Leu Ala Pro Asp Gly Arg 160 155

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Ser Ser Phe Ala Arg Cys Tyr Asn Val Arg Gly Ser Tyr Lys Cy 230 235 24	rs :0
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Gly Asn Tyr Ile Val Lys Val Asn Ile Gln Gly Asn Gly Thr Leu 110 115 120
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Lys Pro Val Val Gln Ile His Pro Pro Ser Gly Ala Val Glu Tyr 140 145 150
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Lys Val Gly Glu Val Phe Thr Val Asp Leu Gly Glu Ala Ile Leu 245 250 255
Phe Asp Cys Ser Ala Asp Ser His Pro Pro Asn Thr Tyr Ser Trp 260 265 270
Ile Arg Arg Thr Asp Asn Thr Thr Tyr Ile Ile Lys His Gly Pro 275 280 285
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205

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<212> PRT

<213> Homo Sapien

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Val Gly Glu Arg Gly Gly Pro Gln Asn Pro Asp Ser Arg Ala Arg

Leu Asp Gln Ser Asp Glu Asp Phe Lys Pro Arg Ile Val Pro Tyr

Tyr Arg Asp Pro Asn Lys Pro Tyr Lys Lys Val Leu Arg Thr Arg

Tyr Ile Gln Thr Glu Leu Gly Ser Arg Glu Arg Leu Leu Val Ala

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His	Leu	1 F	lis	Thr		is 70	Phe	Gl	у 3	Ala	As	p '	Tyr 175	Asp	Tr	, I	Phe	Phe	11e)
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<213> Homo Sapien

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Gly Gly	Arg	Phe	Asp 665	Arg	Gln	Ala	Ser	Ala 670	Glu	Gly	Cys	Phe	Tyr 675
Asn Ala	Asp	Tyr	Leu 680	Ala	Ala	Arg	Ala	Arg 685	Leu	Ala	Gly	Glu	Leu 690
Ala Gly	Gln	Glu	Glu 695	Glu	Glu	Ala	Leu	Glu 700	Gly	Leu	Glu	Val	Met 705
Asp Val	Phe	Leu	Arg 710	Phe	Ser	Gly	Leu	His 715	Leu	Phe	Arg	Ala	Val 720
Glu Pro	Gly	Leu	Val 725	Gln	Lys	Phe	Ser	Leu 730	Arg	Asp	Cys	Ser	Pro 735
Arg Leu	Ser	Glu	Glu 740	Leu	Tyr	His	Arg	Cys 745	Arg	Leu	. Ser	Asn	1 Leu 750
Glu Gly	Leu	ı Gly	Gly 755	Arg	Ala	Gln	Leu	Ala 760	Met	Ala	Lev	Phe	Glu 765
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catcatcacc tacaagctcc taacaagaa gatatcttga aaatttcaga 250

ggatgagcgc atggagctca gtaagagctt tcgagtatac tgtattatcc 300

ttgtaaaacc caaagatgtg agtctttggg ctgcagtaaa ggagacttgg 350

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Gly	His	Gly	Asn	Arg 35	Met	His	His	His	Glu 40	His	His	His	Leu	Gln 45
Ala	Pro	Asn	Lys	Glu 50	Asp	Ile	Leu	Lys	Ile 55	Ser	Glu	Asp	Glu	Arg 60
Met	Glu	Leu	Ser	Lys 65	Ser	Phe	Arg	Val	Tyr 70	Cys	Ile	Ile	Leu	Val 75
Lys	Pro	Lys	Asp	Val	Ser	Leu	Trp	Ala	Ala 85	Val	Lys	Glu	Thr	Trp 90
Thr	Lys	s His	cys	Asp	Lys	Ala	Glu	Ph∈	Phe 100	e Ser	Ser	Glu	Asn	Val 105
Lys	. Val	l Phe	e Glu	110	: Ile	Asn	Met	: Asp	Th:	Asr	a Asp	Met	Trp	Leu 120
Met	. Me	t Arg	g Lys	s Ala 125	а Туг 5	Lys	: Туі	c Ala	a Phe	e Asp	Lys	Tyr	Arg	Asp 135
Glı	ту:	r As:	n Trj	p Phe 14	e Phe	e Lei	ı Ala	a Ar	g Pro	o Thi	r Thr	Phe	Alã	lle 150
110	e Gl	u As	n Le	u Ly 15	s Ty: 5	r Phe	e Le	u Le	u Ly 16	s Ly: 0	s Asp	Pro	Sei	Gln 165
Pr	o Ph	е Ту	r Le	u Gl 17	у Ні 0	s Thi	r Il	e Ly	s Se 17	r Gl	y Ası	o Lev	ı Glı	180 Tyr
Va	1 Gl	у Ме	t Gl	u Gl 18	y Gl	y 11	e Va	l Le	u Se 19	r Va 0	l Gl	u Se:	r Me	t Lys 195
Ar	g Le	eu As	sn Se	r Le	u Le	u As	n Il	e Pr	o Gl 20	.u Ly)5	s Cy	s Pr	o Gl	u Gln 210
Gl	y G1	Ly Me	et Il	.e Tr 21	:р L ұ	rs Il	e Se	er Gl	u As 22	sp Ly 20	rs Gl	n Le	u Al	a Val 225
СУ	rs Le	eu L	ys Ty	yr Al 21	La GI 30	Ly Va	al Ph	ne Al	La G: 2:	lu As 35	sn Al	a Gl	u As	p Ala 240
As	sp G	ly L	ys A		al Pl 45	ne As	sn Tl	nr L	ys S 2	er Va 50	al Gl	.у L∈	eu Se	er Ile 255
L	ys G	lu A	la M	et T	hr T	yr H:	is P	ro A	sn G	ln V	al Va	al Gl	u Gl	ly Cys

270 265 260 Cys Ser Asp Met Ala Val Thr Phe Asn Gly Leu Thr Pro Asn Gln 275 Met His Val Met Met Tyr Gly Val Tyr Arg Leu Arg Ala Phe Gly 295 His Ile Phe Asn Asp Ala Leu Val Phe Leu Pro Pro Asn Gly Ser 310 305 Asp Asn Asp <210> 342 <211> 23 <212> DNA <213> Artificial Sequence <220> <223> Synthetic Oligonucleotide Probe <400> 342 tecceaagee gttetagaeg egg 23 <210> 343 <211> 18 <212> DNA <213> Artificial Sequence <220> <223> Synthetic Oligonucleotide Probe <400> 343 ctggttcttc cttgcacg 18 <210> 344 <211> 28 <212> DNA <213> Artificial Sequence <220> <223> Synthetic Oligonucleotide Probe <400> 344 gcccaaatgc cctaaggcgg tatacccc 28 <210> 345 <211> 50 <212> DNA <213> Artificial Sequence <220>

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MEC	WOII	DCI	DCI											15
1				5					10					10
				_										

- Cys Phe Ser Ser Gln Met Phe Leu Trp Thr Val Ala Gly Ile Pro 20 25 30
- Ile Leu Phe Leu Ser Ala Cys Phe Ile Thr Arg Cys Val Val Thr 35 40 45
- Phe Arg Ile Phe Gln Thr Cys Asp Glu Lys Lys Phe Gln Leu Pro
 50 55 60
- Glu Asn Phe Thr Glu Leu Ser Cys Tyr Asn Tyr Gly Ser Gly Ser 65 70 75
- Val Lys Asn Cys Cys Pro Leu Asn Trp Glu Tyr Phe Gln Ser Ser 80 85 90
- Cys Tyr Phe Phe Ser Thr Asp Thr Ile Ser Trp Ala Leu Ser Leu 95 100 105
- Lys Asn Cys Ser Ala Met Gly Ala His Leu Val Val Ile Asn Ser 110 115 120
- Gln Glu Glu Gln Glu Phe Leu Ser Tyr Lys Lys Pro Lys Met Arg 125 130 135
- Glu Phe Phe Ile Gly Leu Ser Asp Gln Val Val Glu Gly Gln Trp 140 145
- Gln Trp Val Asp Gly Thr Pro Leu Thr Lys Ser Leu Ser Phe Trp
- Asp Val Gly Glu Pro Asn Asn Ile Ala Thr Leu Glu Asp Cys Ala 170 175 180

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<211> 310

<212> PRT

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Phe Glu Ser Val Glu Leu Ser Cys Ile Ile Thr Asp Ser Gln Thr 50 55 60

Ser Asp Pro Arg Ile Glu Trp Lys Lys Ile Gln Asp Glu Gln Thr
65 70 75

Thr Tyr Val Phe Phe Asp Asn Lys Ile Gln Gly Asp Leu Ala Gly 80 85 90

Arg Ala Glu Ile Leu Gly Lys Thr Ser Leu Lys Ile Trp Asn Val 95 100 105

Thr Arg Arg Asp Ser Ala Leu Tyr Arg Cys Glu Val Val Ala Arg 110 115 120

Asn Asp Arg Lys Glu Ile Asp Glu Ile Val Ile Glu Leu Thr Val 125 130 135

Gln Val Lys Pro Val Thr Pro Val Cys Arg Val Pro Lys Ala Val

Pro Val Gly Lys Met Ala Thr Leu His Cys Gln Glu Ser Glu Gly

His Pro Arg Pro His Tyr Ser Trp Tyr Arg Asn Asp Val Pro Leu 170 175 180

Pro Thr Asp Ser Arg Ala Asn Pro Arg Phe Arg Asn Ser Ser Phe 185 190 195

His	Leu	Asn	Ser	Glu 200	Thr	Gly	Thr	Leu	Val 205	Phe	Thr	Ala	Val	His 210
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Asn	Ile	Gly	Gly	Ile 245	Ile	Gly	Gly	Val	Leu 250	Val	Val	Leu	Ala	Val 255
Leu	Ala	Leu	Ile	Thr 260	Leu	Gly	Ile	Cys	Cys 265	Ala	Tyr	Arg	Arg	Gly 270
Tyr	Phe	Ile	Asn	Asn	Lys	Gln	Asp	Gly	Glu	Ser	Tyr	Lys	Asn	Pro
				275					280					285
Gly	Lys	Pro	Asp	Gly 290	Val	Asn	Tyr	Ile	Arg 295	Thr	Asp	Glu	Glu	Gly 300
Asp	Phe	Arg	His	Lys 305	Ser	Ser	Phe	Val	Ile 310					